Material Safety Data Sheet

Ferric Nitrate, Nonahydrate, GR

Section 1. Product and Company Identification

Product name : Ferric Nitrate, Nonahydrate, GR

Product code : FX0225

Synonym : Ferric Nitrate, Ferric Nitrate Nonahydrate

Material uses : Other non-specified industry: Analytical reagent.

Manufacturer : EMD Chemicals Inc.
P.O. Box 70
480 Democrat Road
Gibbstown, NJ 08027
856-423-6300 Technical Service
Monday - Friday: 8:00 - 5:00 PM

Validation date : **3/31/2006.**

Print date :

In case of emergency : 800-424-9300 CHEMTREC (USA)
613-996-6666 CANUTEC (Canada)
24 Hours/Day: 7 Days/Week

Section 2. Hazards Identification

Physical state : Solid. (Crystals.)

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview : WARNING!

OXIDIZER.
HARMFUL IF INHALED OR SWALLOWED.
CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE.
Do not ingest. Avoid contact with skin and clothing. Avoid breathing dust. Store in tightly-closed container. Avoid contact with combustible materials. Use only with adequate ventilation. Wash thoroughly after handling.

Routes of entry : Inhalation. Ingestion.

Potential acute health effects

Eyes : Irritating to eyes.

Skin : Irritating to skin.

Inhalation : Toxic by inhalation. Irritating to respiratory system.

Ingestion : Toxic if swallowed.

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Teratogenicity / Reproductive toxicity : No known significant effects or critical hazards.

Medical conditions aggravated by over-exposure : Repeated skin exposure can produce local skin destruction or dermatitis. Repeated or prolonged exposure to the substance can produce lung damage. Repeated exposure of the eyes to a low level of dust can produce eye irritation.

See toxicological information (section 11)

Section 3. Composition/Information on Ingredients

United States

Name	CAS number	% by Weight
Ferric Nitrate	7782-61-8	100

Section 4. First Aid Measures

Eye contact : Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention.

Skin contact : Get medical attention immediately. Flush contaminated skin with plenty of water. Continue to rinse for at least 10 minutes. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing or wear gloves. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Inhalation : Get medical attention immediately. Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Ingestion : Get medical attention immediately. Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Section 5. Fire Fighting Measures

Flammability of the product : This material increases the risk of fire and may aid combustion. Contact with combustible material may cause fire.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Not available.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental Release Measures

Personal precautions : Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment. Do not touch or walk through spilled material.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods for cleaning up : If emergency personnel are unavailable, carefully scoop up spilled materials and use a non-sparking or explosion-proof means to transfer material to an appropriate container for disposal by incineration. Avoid creating dusty conditions and prevent wind dispersal.

Section 7. Handling and Storage

Handling : Do not ingest. Avoid contact with eyes, skin and clothing. Keep container closed. Use only with adequate ventilation. Avoid breathing dust. Store in tightly-closed container. Avoid contact with combustible materials. Wash thoroughly after handling.

Storage : Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalis, reducing agents and combustibles.

Section 8. Exposure Controls/Personal Protection

Consult local authorities for acceptable exposure limits.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal protection

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Recommended: safety glasses with side-shields

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Body: Recommended: lab coat

Respiratory : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 9. Physical and Chemical Properties

Physical state : Solid. (Crystals.)

Color : Violet.

Molecular weight : 404 g/mole

Molecular formula : Fe.9H2O.3HNO3

Section 10. Stability and Reactivity

Stability and reactivity : The product is stable.

Incompatibility with various substances : Reactive or incompatible with the following materials: oxidizing materials and organic materials.

Hazardous decomposition products : nitrogen oxides (NO, NO_2 etc.)

Hazardous polymerization : Will not occur.

Section 11. Toxicological Information

Toxicity data

United States

Product/ingredient name	Test	Result	Route	Species
Ferric Nitrate	LD50	3250 mg/kg	Oral	Rat

Other toxic effects on humans : Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation (lung irritant).

Specific effects

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Teratogenicity / Reproductive toxicity : No known significant effects or critical hazards.

Sensitization

Ingestion : No known significant effects or critical hazards.

Inhalation : Irritating to respiratory system.

Eyes : Irritating to eyes.

Skin : Irritating to skin.

Section 12. Ecological Information

Environmental precautions : No known significant effects or critical hazards.

Products of degradation : These products are nitrogen oxides (NO, NO_2 etc.). Some metallic oxides.

Toxicity of the products of : The products of degradation are less toxic than the product itself.

biodegradation

Section 13. Disposal Considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport Information

Regulatory information	UN number	Proper shipping name	Class	PG*	Label	Additional information
DOT Classification	1466	FERRIC NITRATE	5.1	III		RQ: 1000 lbs. (453.6 kg)

PG* : Packing group

Section 15. Regulatory Information

United States

HCS Classification : Oxidizing material
Toxic material
Irritating material

U.S. Federal regulations : TSCA 8(b) inventory: Listed

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Ferric Nitrate
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Ferric Nitrate : Fire hazard, Immediate (acute) health hazard
Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

SARA 313

Product name	CAS number	Concentration
Form R - Reporting requirements	:	Ferric Nitrate 7782-100-61-8
Supplier notification	:	Ferric Nitrate 7782-100-61-8

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations : No products were found.

Canada

WHMIS (Canada) : Class C: Oxidizing material.
Class D-2B: Material causing other toxic effects (Toxic).

CEPA DSL/CEPA NDSL : No products were found.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

EU regulations

Risk phrases : This product is not classified according to EU legislation.

International regulations

International lists : Australia (NICNAS): Ferric Nitrate

China: Ferric Nitrate

Japan (METI): Ferric Nitrate

Philippines (RA6969): Ferric Nitrate

Section 16. Other Information

Label requirements : WARNING!

OXIDIZER.
HARMFUL IF INHALED OR SWALLOWED.
CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE.

National Fire Protection Association (U.S.A.) :

	0	**Flammability**
Health	1	1 **Instability**
	OX	**Special**

Notice to reader

The statements contained herein are based upon technical data that EMD Chemicals Inc. believes to be reliable, are offered for information purposes only and as a guide to the appropriate precautionary and emergency handling of the material by a properly trained person having the necessary technical skills. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use, storage and disposal of these materials and the safety and health of employees and customers and the protection of the environment. EMD CHEMICALS INC. MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, WITH RESPECT TO THE INFORMATION HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS.