

# MATERIAL SAFETY DATA SHEET

Ferric Chloride Hexahydrate

## SECTION 1 . Product and Company Identification

Product Name and Synonym: Ferric Chloride Hexahydrate  
Product Code: F2520  
Material Uses:  
Manufacturer: Science Stuff  
1104 Newport Ave  
Austin, TX 78753  
(512) 837-6020  
Entry Date : 6/4/2013  
Print Date: 6/4/2013  
24 Hour Emergency Assistance : Chemtrec 800-424-9300  
Canutec 613-996-6666

Health:	2			
Flammability:	0			
Reactivity:	0			
Hazard Rating:				
Least	Slight	Moderate	High	Extreme
0	1	2	3	4
NA=Not Applicable		NE=Not Established		

## SECTION 2 HAZARD IDENTIFICATION

May be harmful if swallowed. May cause irritation. Avoid breathing vapors, or dusts. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling.

Physical state: Solid. [Crystals.]  
OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).  
Emergency overview:

**DANGER!**  
**CAUSES EYE AND SKIN BURNS.**  
**MAY BE HARMFUL IF INHALED**  
**HARMFUL IF**  
**SWALLOWED.**

Do not ingest. Do not get in eyes or on skin or clothing.  
Keep container tightly closed and sealed until ready for use. Use only with adequate ventilation. Wash thoroughly after handling.

Routes of entry:  
Inhalation. Ingestion.

Potential acute health effects:

Eyes: Corrosive to eyes. Causes burns  
Skin: Corrosive to the skin. Causes burns.  
Inhalation: May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.  
Ingestion: Toxic if swallowed. May cause burns to mouth, throat and stomach.  
Carcinogenicity: No known significant effects or critical hazards.  
Mutagenicity: No known significant effects or critical hazards.  
Teratogenicity/ Reproductive toxicity: No known significant effects or critical hazards.  
Developmental effects: No known significant effects or critical hazards.  
Fertility effects: No known significant effects or critical hazards.  
Medical conditions aggravated by over-exposure: None known

## SECTION 3 MIXTURE COMPONENTS

# Ferric Chloride Hexahydrate

SARA 313	Component	CAS Number	Percent Comp.	Dimension	Exposure Limits
<input type="checkbox"/>	Ferric Chloride Hexahydrate	CAS# 10025-77-1	100 %	W/W	OSHA TWA 1 mg(Fe)/mf

## SECTION 4 FIRST AID MEASURES

May be harmful if swallowed. May cause irritation. Avoid breathing vapors, or dusts. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling.

FIRST AID: SKIN: Wash exposed area with soap and water. If irritation persists, seek medical attention.

EYES: Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

INGESTION: If swallowed, induce vomiting immediately after giving two glasses of water. Never give anything by mouth to an unconscious person.

## SECTION 5 FIRE FIGHTING MEASURES

Fire Extinguisher Type:	Any suitable for other materials involved.
Fire / Explosion Hazards:	Decomposes to yield HCL on exposure to light
Fire Fighting Procedure:	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

Sweep up and place in suitable (fiberboard) containers for reclamation or later disposal. Ventilate area and wash spill site after material pickup is complete.

Personal precautions: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personal from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up: Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

## SECTION 7 HANDLING AND STORAGE

Keep container tightly closed. Store in a cool, dry, well ventilated area. Avoid exposure to light and moisture; avoid contact with strong mineral acids. Wash thoroughly after handling.

## SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection:	Dust mask or cartridge respirator
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Ferric Chloride Hexahydrate

Ventilation

Local Exhaust

Mechanical

Protective Gloves:

Wear appropriate gloves to prevent skin exposure

Eye Protection:

Safety goggles

Other Protective Equipment:

Wear appropriate clothing to prevent skin exposure

Engineering measures: if user operations generate dust, fumes, gas, 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.

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.

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: splash goggles, face shield

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

Body recommended:  
safety apron

Respiratory: Use a properly fitted, air-purifying or air-fed 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.

Recommended:  
neoprene

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

Melting Point:	37°C	Percent Volatile by Volume:	Information not available
Boiling Point:	280°C	Evaporation Rate	Information not available
Vapor Pressure:	Information not available	Evaporation Standard	
Vapor Density:	Information	Auto Ignition Temp	Information not

Ferric Chloride Hexahydrate

Solubility in Water:	not available Soluble	Lower Flamm. Limit in Air	available Information not available
Appearance /Odors:	Brownish-yellow solid with HCl odor	Upper Flamm. Limit in Air	Information not available
Flash Point:	Information not available		
Specific Gravity:	1.82		

**SECTION 10 STABILITY AND REACTIVITY INFORMATION**

Stability:	Stable
Conditions to Avoid:	Contact with strong mineral acids. Excessive heat, moisture, and light
Materials to Avoid:	Acidic conditions, Allyl chloride, Sodium, Potassium
Hazardous Decomposition Products:	HCl fumes, Iron oxides
Hazardous polymerization:	Will Not Occur
Conditions to Avoid:	None known

**SECTION 11 Toxicological Information**

Ferric Chloride, Hexahydrate  
LDLo Oral Rat 900 mg/kg  
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.

**SECTION 12 Ecological Information**

Environmental effects : No known significant effects or critical hazards.  
Other adverse effects : No known significant effects or critical hazards.

**SECTION 13 Disposal Considerations**

The information presented 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. Disposal should be in accordance with applicable regional, national and local laws and regulations.

**SECTION 14 Transport Information**

DOT Classification: Corrosive solid, acidic, inorganic, n.o.s.  
(Ferric chloride hexahydrate), 8, UN3260, PG III

DOT Regulations may change from time to time. Please consult the most recent D.O.T. regulations.

**SECTION 15 Regulatory Information**

United States  
HCS Classification:  
Toxic material  
Corrosive material  
U.S. Federal regulations:

## Ferric Chloride Hexahydrate

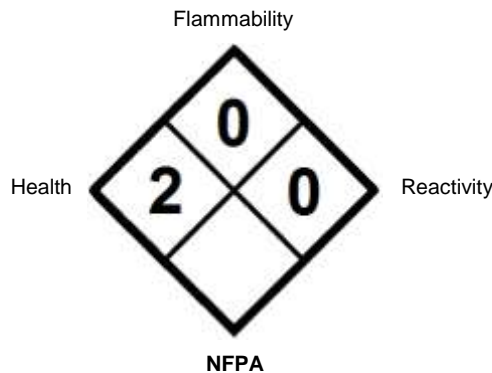
United States inventory (TSCA 8b): listed  
TSCA (Toxic Substance Control Act): This product is listed on the TSCA Inventory.  
SARA 302/304/311/312 extremely hazardous substances: No products were found.  
SARA 302/304 emergency planning and notifications: No products were found.  
SARA 302/304/311/312 hazardous chemicals: Ferric Chloride, Hexahydrate  
SARA 311/312 MSDS distribution- Chemical inventory- hazard identification: Ferric Chloride, Hexahydrate  
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 substance: No products were found.  
Clean Air Act (CAA) 112 regulated toxic substance: No products were found.

DEA List I Chemicals : not listed  
(Precursor Chemicals)  
DEA List II Chemicals : not listed  
(essential Chemicals)  
Canada  
WHMIS (Canada) :  
Class E: Corrosive material  
Canadian lists : CEPA Toxic Substance: This material is not listed.  
Canadian ARET: This material is not listed.  
Canadian NPRI: This material is not listed.  
Alberta Designated Substances: This material is not listed.  
Ontario Designated Substances: This material is not listed.  
Quebec Designated Substances: This material is not listed.

CEPA DSL/ CEPA NDSL : CEPA DSL:  
This material is listed or exempted.  
This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

### SECTION 16

### Additional Information



#### Revisions

3/26/2012	0.1	Revised to add Hexahydrate in proper name LS
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The information herein is believed to be accurate and is offered in good faith for the user's consideration and investigation. No warranty either expressed or implied is made for the completeness or accuracy of the information whether originating from the above mentioned company or not. Users of this material should satisfy themselves by independent investigation of current scientific and medical knowledge that the material can be used safely.