

# Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.18.2014

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## Ferric Chloride Hexahydrate

### SECTION 1: Identification of the substance/mixture and of the supplier

**Product name:** Ferric Chloride Hexahydrate

**Manufacturer/Supplier Trade name:**

**Manufacturer/Supplier Article number:** S25317

**Recommended uses of the product and restrictions on use:**

**Manufacturer Details:**

AquaPhoenix Scientific, Inc  
9 Barnhart Drive, Hanover, PA 17331  
(717) 632-1291

**Supplier Details:**

Fisher Science Education  
6771 Silver Crest Road, Nazareth, PA 18064  
(724)517-1954

**Emergency telephone number:**

**Fisher Science Education**  
Emergency Telephone No.: 800-535-5053

### SECTION 2: Hazards identification

**Classification of the substance or mixture:**



**Irritant**



**Corrosive**

AcTox Oral 4.  
AcTox Dermal 4.  
AcTox Inhaln 4.  
Skin Corr 1B.  
AqTox Chronic 3.

**Signal word:** Danger

**Hazard statements:**

May be corrosive to metals.  
Harmful if swallowed.  
Causes severe skin burns and eye damage.  
Harmful to aquatic life with long lasting effects.

**Precautionary statements:**

If medical advice is needed, have product container or label at hand.  
Keep out of reach of children.  
Read label before use.  
Use only outdoors or in a well-ventilated area.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Do not breathe dust/fume/gas/mist/vapours/spray.

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Do not eat, drink or smoke when using this product.

Wash skin thoroughly after handling.

IF ON SKIN: Wash with soap and water.

Rinse mouth.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor/physician.

Call a POISON CENTER or doctor/physician if you feel unwell.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Take off contaminated clothing and wash before reuse.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Specific treatment (see ... on this label).

Store locked up.

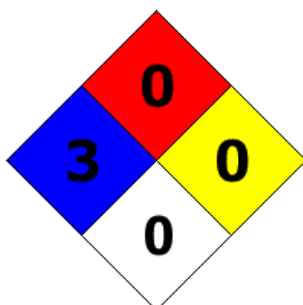
Dispose of contents/container to ....

### Other Non-GHS Classification:

#### WHMIS



#### NFPA/HMIS



NFPA SCALE (0-4)

|                     |   |
|---------------------|---|
| Health              | 3 |
| Flammability        | 0 |
| Physical Hazard     | 0 |
| Personal Protection | 0 |

HMIS RATINGS (0-4)

### SECTION 3: Composition/information on ingredients

#### Ingredients:

|                |                             |       |
|----------------|-----------------------------|-------|
| CAS 10025-77-1 | Ferric Chloride Hexahydrate | 100 % |
|----------------|-----------------------------|-------|

Percentages are by weight

### SECTION 4: First aid measures

#### Description of first aid measures

##### After inhalation:

Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. If breathing difficult, give oxygen. If not breathing give artificial respiration. Do NOT use mouth to mouth resuscitation.

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#### After skin contact:

Wash affected area with soap and water. Rinse/flush exposed skin gently using water for 15-20 minutes. Seek medical advice if discomfort or irritation persists. Destroy contaminated shoes.

#### After eye contact:

Protect unexposed eye. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned. Do NOT allow victim to rub or keep eyes closed. Extensive irrigation with water is required (at least 30 min).

#### After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Seek medical attention if irritation, discomfort or vomiting persists. If victim is conscious and alert give 2-4 cup fulls of milk or water. Never give anything by mouth to an unconscious person.

#### Most important symptoms and effects, both acute and delayed:

Irritation. Nausea. Headache. Shortness of breath.

#### Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician.

### SECTION 5: Firefighting measures

#### Extinguishing media

##### Suitable extinguishing agents:

If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

##### Unsuitable extinguishing agents:

Do NOT get water inside containers.

#### Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors. Thermal decomposition can lead to release of irritating gases and vapors. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

#### Advice for firefighters:

##### Protective equipment:

Use NIOSH-approved respiratory protection/breathing apparatus.

##### Additional information (precautions):

Move product containers away from fire or keep cool with water spray as a protective measure, where feasible. Use spark-proof tools and explosion-proof equipment.

### SECTION 6: Accidental release measures

#### Personal precautions, protective equipment and emergency procedures:

Wear protective equipment. Transfer to a disposal or recovery container. Use respiratory protective device against the effects of fumes/dust/aerosol. Ensure adequate ventilation. Stop the spill, if possible. Contain spilled material by diking or using inert absorbent.

#### Environmental precautions:

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13. Should not be released into the environment.

#### Methods and material for containment and cleaning up:

If in a laboratory setting, follow Chemical Hygiene Plan procedures. Collect liquids using vacuum or by use of absorbents. Place into properly labeled containers for recovery or disposal. If necessary, use trained response

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staff/contractor. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

**Reference to other sections:** None

#### SECTION 7: Handling and storage

##### Precautions for safe handling:

Minimize dust generation and accumulation. Wash hands after handling. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Discard contaminated shoes. Keep container closed when not in use. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Follow good hygiene procedures when handling chemical materials. Do not eat, drink, smoke, or use personal products when handling chemical substances. Use only in well ventilated areas. Avoid contact with eyes, skin, and clothing.

##### Conditions for safe storage, including any incompatibilities:

Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers.

#### SECTION 8: Exposure controls/personal protection



##### Control Parameters:

10025-77-1, Ferric Chloride Hexahydrate, 1 mg/m<sup>3</sup> USA. OSHA - TABLE Z - 1 Limits for Air Contaminants - 1910.1000.  
10025-77-1, Ferric Chloride Hexahydrate, 1 mg/m<sup>3</sup> USA. ACGIH Threshold Limit Values (TLV).  
10025-77-1, Ferric Chloride Hexahydrate, 1 mg/m<sup>3</sup> USA. NIOSH Recommended Exposure Limits.

##### Appropriate Engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or dusts (total/respirable) below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. Use under a fume hood. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

##### Respiratory protection:

Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable.

##### Protection of skin:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

##### Eye protection:

Safety glasses with side shields or goggles.

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#### General hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

### SECTION 9: Physical and chemical properties

|                                            |                      |                                                 |                                                            |
|--------------------------------------------|----------------------|-------------------------------------------------|------------------------------------------------------------|
| <b>Appearance (physical state, color):</b> | Black - Brown Powder | <b>Explosion limit lower:</b>                   | Not Determined                                             |
|                                            |                      | <b>Explosion limit upper:</b>                   | Not Determined                                             |
| <b>Odor:</b>                               | Odorless             | <b>Vapor pressure at 20°C:</b>                  | Not Determined                                             |
| <b>Odor threshold:</b>                     | Not Determined       | <b>Vapor density:</b>                           | Not Determined                                             |
| <b>pH-value:</b>                           | Not Determined       | <b>Relative density:</b>                        | Not Determined                                             |
| <b>Melting/Freezing point:</b>             | 280F                 | <b>Solubilities:</b>                            | Soluble (80% in water at 20C).                             |
| <b>Boiling point/Boiling range:</b>        | Not Determined       | <b>Partition coefficient (n-octanol/water):</b> | Not Determined                                             |
| <b>Flash point (closed cup):</b>           | Not Determined       | <b>Auto/Self-ignition temperature:</b>          | Not Determined                                             |
| <b>Evaporation rate:</b>                   | Not Determined       | <b>Decomposition temperature:</b>               | 300 F                                                      |
| <b>Flammability (solid, gaseous):</b>      | Not Determined       | <b>Viscosity:</b>                               | a. Kinematic: Not Determined<br>b. Dynamic: Not Determined |
| <b>Density at 20°C:</b>                    | Not Determined       |                                                 |                                                            |

### SECTION 10: Stability and reactivity

**Reactivity:** None

#### Chemical stability:

No decomposition if used and stored according to specifications.

**Possible hazardous reactions:** None

#### Conditions to avoid:

Store away from oxidizing agents, strong acids or bases. Moisture and high temperatures.

#### Incompatible materials:

Oxidizing agents, allyl chloride, potassium, sodium.

#### Hazardous decomposition products:

Carbon oxides (CO, CO<sub>2</sub>). Hydrogen chloride, chlorine, irritating and toxic fumes and gases, chloride fumes, oxides of iron.

### SECTION 11: Toxicological information

#### Acute Toxicity:

##### Oral:

900 mg/kg LD50 oral rat

10025-77-1 LDLo rat 900mg/kg (900mg/kg)

**Chronic Toxicity:** No additional information.

**Corrosion Irritation:** No additional information.

**Sensitization:** No additional information.

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**Numerical Measures:** No additional information.

**Carcinogenicity:** No additional information.

**Mutagenicity:** No additional information.

**Reproductive Toxicity:** No additional information.

#### SECTION 12: Ecological information

**Ecotoxicity:** No additional information.

**Persistence and degradability:**

Readily degradable in the environment.

**Bioaccumulative potential:** No additional information.

**Mobility in soil:** No additional information.

**Other adverse effects:** No additional information.

#### SECTION 13: Disposal considerations

**Waste disposal recommendations:**

Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product.

#### SECTION 14: Transport information

##### US DOT

**UN Number:**

ADR, ADN, DOT, IMDG, IATA

3260

**Limited Quantity Exception:**

None

**Bulk:**

**RQ (if applicable):** None

**Proper shipping Name:** Corrosive solid, acidic, inorganic, n.o.s. ( Iron trichloride hexahydrate ).

**Hazard Class:** None

**Packing Group:** III.

**Marine Pollutant (if applicable):** No additional information.

**Comments:** None

**Non Bulk:**

**RQ (if applicable):** None

**Proper shipping Name:** Corrosive solid, acidic, inorganic, n.o.s. ( Iron trichloride hexahydrate ).

**Hazard Class:** None

**Packing Group:** III.

**Marine Pollutant (if applicable):** No additional information.

**Comments:** None

#### SECTION 15: Regulatory information

**United States (USA)**

**SARA Section 311/312 (Specific toxic chemical listings):**

Acute

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#### SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

#### RCRA (hazardous waste code):

None of the ingredients are listed.

#### TSCA (Toxic Substances Control Act):

All ingredients are listed.

#### CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

#### Proposition 65 (California):

##### Chemicals known to cause cancer:

None of the ingredients are listed.

##### Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

##### Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

##### Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

#### Canada

##### Canadian Domestic Substances List (DSL):

All ingredients are listed.

##### Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients are listed.

##### Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients are listed.

### SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

**GHS Full Text Phrases:** None

#### Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.

PNEC Predicted No-Effect Concentration (REACH).

CFR Code of Federal Regulations (USA).

SARA Superfund Amendments and Reauthorization Act (USA).

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RCRA Resource Conservation and Recovery Act (USA).  
TSCA Toxic Substances Control Act (USA).  
NPRI National Pollutant Release Inventory (Canada).  
DOT US Department of Transportation.  
IATA International Air Transport Association.  
GHS Globally Harmonized System of Classification and Labelling of Chemicals.  
ACGIH American Conference of Governmental Industrial Hygienists.  
CAS Chemical Abstracts Service (division of the American Chemical Society).  
NFPA National Fire Protection Association (USA).  
HMIS Hazardous Materials Identification System (USA).  
WHMIS Workplace Hazardous Materials Information System (Canada).  
DNEL Derived No-Effect Level (REACH).

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