


## 1 Identification

- **Product identifier**
  - **Trade name:** Ferric Chloride Hexahydrate
  - **Article number:** 153500
  - **CAS Number:**  
10025-77-1
  - **EC number:**  
231-729-4
  - **Molecular Formula**  $FeCl_2 \cdot 6H_2O$
  - **Molecular Weight** 270.3
  - **Application of the substance / the mixture** For Research Use Only
  - **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**  
MP Biomedicals, LLC  
29525 Fountain Parkway  
Solon, OH 44139  
United States  
www.mpbio.com
- Distributed by:

 **fisher scientific**  
part of Thermo Fisher Scientific

112 Colonnade Road, Ottawa ON, K2E 7L6  
1-800-234-7437
- **Information department:** Quality Control Department
  - **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

## 2 Hazard Identification

- **Classification of the substance or mixture**



GHS05 Corrosion

Skin Corrosion - Category 1C      H314 Causes severe skin burns and eye damage.

Serious Eye Damage - Category 1      H318 Causes serious eye damage.



GHS07

Acute Toxicity (Oral) - Category 4      H302 Harmful if swallowed.

- **Label elements**
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05



GHS07

- **Signal word** Danger
- **Hazard statements**  
Harmful if swallowed.  
Causes severe skin burns and eye damage.
- **Precautionary statements**  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Wear protective gloves/protective clothing/eye protection/face protection.

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/07/2017

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**Trade name: Ferric Chloride Hexahydrate**

(Contd. of page 1)

*IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.*  
*IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.*  
*IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].*  
*IF INHALED: Remove person to fresh air and keep 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/doctor.*  
*Specific treatment (see on this label).*  
*Wash contaminated clothing before reuse.*  
*Store locked up.*  
*Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Hazard description:**

· **WHMIS-symbols:**

D2B - Toxic material causing other toxic effects  
 E - Corrosive material



· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**

HEALTH	3	Health = 3
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

### 3 Composition/Information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**  
10025-77-1 Ferric Chloride Hexahydrate
- **Identification number(s)**
- **EC number: 231-729-4**

### 4 First-aid Measures

- **Description of first aid measures**
- **General information:**  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.  
Consult your Doctor. Show the safety data sheet to the Doctor. Away from the dangerous area.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

(Contd. on page 3)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 09/07/2017

Reviewed on 09/07/2017

**Trade name: Ferric Chloride Hexahydrate**

(Contd. of page 2)

- **After swallowing:**  
Never give anything by mouth to an unconscious person. Rinse mouth with water. If symptoms persist consult a Doctor.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture**  
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

### 6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures**  
Mount respiratory protective device.  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/surface or ground water.
- **Methods and material for containment and cleaning up:**  
Use neutralizing agent.  
Pick up mechanically, dispose contaminated material as waste according to Section 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and Storage

- **Handling:**
- **Precautions for safe handling**  
Thorough dedusting.  
Ensure good ventilation/exhaustion at the workplace. Avoid direct contact with skin and eyes.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 15 - 30°C
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure Controls/Personal Protection

- **Additional information about design of technical systems:** No further data; see Section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/07/2017

Reviewed on 09/07/2017

**Trade name: Ferric Chloride Hexahydrate**

(Contd. of page 3)

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

## 9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

**Form:** Solid material

**Color:** Yellow-brown

· **Odor:** Indeterminate

· **Odor threshold:** Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

**Boiling point/Boiling range:** 280-285°C

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Product is not flammable.

(Contd. on page 5)

-CA-

# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/07/2017

Reviewed on 09/07/2017

Trade name: Ferric Chloride Hexahydrate

(Contd. of page 4)

· <b>Ignition temperature:</b>	
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Not determined.
· <b>Danger of explosion:</b>	See section 10
· <b>Explosion limits:</b>	
<b>Lower:</b>	Not Applicable
<b>Upper:</b>	Not Applicable
· <b>Vapor pressure at 194°C:</b>	1 hPa
· <b>Density at 20°C:</b>	1.82 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with</b>	Not Determined
· <b>Water:</b>	Not determined.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
· <b>Other information</b>	No further relevant information available.

## 10 Stability and Reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological Information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

Oral	LD50	900 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** Substance is not listed.

(Contd. on page 6)

CA

# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/07/2017

Reviewed on 09/07/2017

**Trade name: Ferric Chloride Hexahydrate**

(Contd. of page 5)

· **NTP (National Toxicology Program) Substance is not listed.**


## 12 Ecological Information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Must not reach bodies of water or drainage ditch undiluted or unneutralized.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal Considerations

- **Waste treatment methods**
- **Recommendation:**  
Can not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Discard must be made according to official regulations.

## 14 Transport Information

- |   |   |
|---|---|
| <b>· UN-Number</b>  |   |
| <b>· DOT, TDG, IMDG, IATA</b>   | UN3260  |
| <b>· UN proper shipping name</b>  |   |
| <b>· DOT</b>  | Corrosive solid, acidic, inorganic, n.o.s. (Ferric Chloride Hexahydrate)      |
| <b>· TDG</b>  | 3260 Corrosive solid, acidic, inorganic, n.o.s. (Ferric Chloride Hexahydrate) |
| <b>· IMDG, IATA</b>   | CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Ferric Chloride Hexahydrate)      |
| <b>· Transport hazard class(es)</b>   |   |
| <b>· DOT</b>  |   |
|  |   |
| <b>· Class</b>  | 8 Corrosive substances  |

(Contd. on page 7)

CA

# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/07/2017

Reviewed on 09/07/2017

Trade name: Ferric Chloride Hexahydrate

(Contd. of page 6)

· **Label** 8  
 · **TDG, IMDG, IATA**



· **Class** 8 Corrosive substances  
 · **Label** 8

· **Packing group**  
 · **DOT, TDG, IMDG, IATA** III

· **Environmental hazards:** Not applicable.

· **Special precautions for user** Warning: Corrosive substances  
 · **EMS Number:** F-A,S-B  
 · **Segregation groups** Acids  
 · **Stowage Category** A

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **DOT**  
 · **Quantity limitations** On passenger aircraft/rail: 25 kg  
 On cargo aircraft only: 100 kg

· **TDG**  
 · **Excepted quantities (EQ)** Code: E1  
 Maximum net quantity per inner packaging: 30 g  
 Maximum net quantity per outer packaging: 1000 g

· **IMDG**  
 · **Limited quantities (LQ)** 5 kg  
 · **Excepted quantities (EQ)** Code: E1  
 Maximum net quantity per inner packaging: 30 g  
 Maximum net quantity per outer packaging: 1000 g

· **UN "Model Regulation":** UN 3260 CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (FERRIC CHLORIDE HEXAHYDRATE), 8, III

## 15 Regulatory Information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is not listed.
- **TSCA (Toxic Substances Control Act):** Substance is not listed.
- **Canadian substance listings:**
- **Canadian Domestic Substances List (DSL)** Substance is not listed.
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 8)

CA

# Safety Data Sheet

acc. to OSHA HCS

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**Trade name: Ferric Chloride Hexahydrate**

(Contd. of page 7)

· **Hazard pictograms**



GHS05   GHS07

· **Signal word** *Danger*

· **Hazard statements**

*Harmful if swallowed.*

*Causes severe skin burns and eye damage.*

· **Precautionary statements**

*Do not breathe dust/fume/gas/mist/vapours/spray.*

*Wash thoroughly after handling.*

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

*Wear protective gloves/protective clothing/eye protection/face protection.*

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

*IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.*

*IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].*

*IF INHALED: Remove person to fresh air and keep 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/doctor.*

*Specific treatment (see on this label).*

*Wash contaminated clothing before reuse.*

*Store locked up.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

## 16 Other Information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Department issuing SDS:** *Quality Control Dept.*

· **Date of preparation / last revision** *09/07/2017 / -*

· **Abbreviations and acronyms:**

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*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)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*