Section I - Product Identification
An aqueous solution of ferric chloride.

Section II - Hazards Identification
Danger: causes severe skin burns and eye damage. Wash thoroughly after handling. Wear protective clothing, eye and face protection. If swallowed: rinse mouth but do not induce vomiting. Immediately contact a poison control center. Remove contaminated clothing and rinse skin with water. Wash clothing before reuse.

Safety Ratings

- Health: Severe
- Flammability: None
- Reactivity: Reactive
- Contact: Hazardous

Recommended safety equipment: safety goggles, lab coat and proper gloves

Storage: General storage

NFPA Ratings

- Health = 3
- Flammability = 0
- Reactivity = 2

Potential Health Effects
Ferric chloride is a strong oxidizer that will cause tissue damage and severe ulcers on contact with skin or eyes. 

- Inhalation: Extremely corrosive to mucous membranes and other structures in the respiratory tract. Will cause pulmonary edema.
- Ingestion: Can cause severe burns to mouth, esophagus and stomach. Also causes nausea, vomiting, diarrhea, etc.
- Skin contact: Can cause burns and ulceration.
- Eye contact: Even brief contact can cause severe damage.
- Chronic Exposure: Unknown
- Aggravation of preexisting conditions: Unknown

Section III - Composition/Information on Components

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS#</th>
<th>OSHA Pel</th>
<th>ACGIH TLV</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ferric chloride</td>
<td>10025-77-1</td>
<td>1 mg/m³ TWA</td>
<td>1 mg/m³ TWA</td>
<td>2% w/v</td>
</tr>
</tbody>
</table>

Section IV - First Aid Measures

- Inhalation: Because of the low vapor pressure, inhalation is unlikely to be a problem with this product. In case of difficulty, remove from source of exposure and get immediate medical attention. Be prepared to assist breathing.
- Ingestion: Do not induce vomiting. If the victim is conscious administer large quantities of water. Never give anything by mouth to an unconscious person.
- Skin Contact: Wash affected area with soap and water. Get medical advice if irritation develops.
- Eye Contact: Rinse thoroughly with running water. Get immediate medical attention.
Section V - Fire Fighting Measures

Flash point: Not applicable.
Flammable Limits: Not applicable.
Fire: Not normally a fire Hazard.
Explosion: Not Normally an explosion hazards.
Fire Extinguishing Media: Any means suitable for surrounding fire.
Special information: Pyrolysis will release corrosive oxides of chromium.

Section VI - Accidental Release Measures
Absorb with a suitable absorbent and store in a suitable container for disposal.

Section VII - Handling and Storage
Store in a closed container, protected from freezing.

Section VIII - Exposure Control/Personal Protection
Airborne Exposure Limits: See section III.
Ventilation System: Usually not required. When required, Refer to the ACGIH document, “Industrial Ventilation, a Manual of Recommended Practices” for details about ventilation.
Personal Respirator: Usually not required. In case of emergency, or when exposure levels are unknown, use a positive pressure, full face piece, air supplied respirator.
Skin protection: Protective gloves are recommended as part of good laboratory practice.
Eye Protection: Laboratory safety goggles or similar products are recommended as part of good laboratory practice.

Section IX - Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point</td>
<td>102 °C</td>
</tr>
<tr>
<td>Vapor pressure (mm Hg)</td>
<td>18 @ 20 °C</td>
</tr>
<tr>
<td>Vapor Density (air = 1)</td>
<td>0.6</td>
</tr>
<tr>
<td>Appearance and Odor</td>
<td>A clear, yellow liquid.</td>
</tr>
<tr>
<td>Density</td>
<td>1.008 g/ml</td>
</tr>
<tr>
<td>Evaporation Rate (water = 1)</td>
<td>1</td>
</tr>
<tr>
<td>Solubility</td>
<td>Miscible with water</td>
</tr>
</tbody>
</table>

Section X - Stability and Reactivity

Stability: Freezes at low temperature.
Hazardous Decomposition Products: Nothing unusual.
Hazardous polymerization: Will not occur.
Incompatibilities: Nothing unusual.
Conditions to avoid: Excessive cold/heat and light.

Section XI - Toxicological Information
None relating to normal exposure.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Known Carcinogenicity?</th>
<th>Anticipated?</th>
<th>IARC Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ferric chloride</td>
<td>No</td>
<td>No</td>
<td>3</td>
</tr>
</tbody>
</table>

Section XII - Ecological Information

Environmental Fate: Not biodegradable.
Environmental Toxicity: Toxic to marine life.

Section XIII - Disposal Considerations
Local governments usually restrict the amounts of iron compounds that may be flushed down the drain. Insure compliance with all government regulations.
Section XIV - Transportation Information
DOT Shipping name: Ferric chloride solution  Hazard Class: 8 Packing Group: III
DOT Hazard Label: Corrosive  DOT Identification Number: UN2582

Section XV - Regulatory Information

Chemical Inventory Status

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>TSCA</th>
<th>EC</th>
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</thead>
<tbody>
<tr>
<td>Ferric chloride</td>
<td>Yes</td>
<td>Yes</td>
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</table>

Federal, State and International Regulations

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>SARA 302</th>
<th>SARA 313</th>
<th>RCRA</th>
<th>TSCA</th>
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<tbody>
<tr>
<td></td>
<td>RQ</td>
<td>TPQ</td>
<td>List</td>
<td>Category</td>
</tr>
<tr>
<td>Ferric chloride</td>
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<td>No</td>
<td>No</td>
<td>Ferric chloride</td>
</tr>
</tbody>
</table>

Chemical Weapons Convention: No, TSCA 12(b): Yes, CDTA: Yes
SARA 311/312: Acute: Yes, Chronic: Yes, Fire: No

Section XVI - Other Information
This information is believed to be correct but is not warranted as such, nor does it purport to be all inclusive.
Revision Date: Nov. 6, 2017