Ferric Chloride, 2%

1. Identification

**Product Name:** Ferric Chloride, 2%

**Recommended Use:** Special Stains

**Manufacturer/Supplier:**
Avantik Biogroup
32 Commerce Street
Springfield, NJ 07081
1-888-392-8411

**In Case of Emergency:**
Chemtrec US 1-800-424-9300
Chemtrec International 703-527-3887

2. Hazards Identification

**OSHA Hazard Classification(s):**
Skin Corrosion - Category 1A
Eye Damage - Category 1

**Signal Word:** Danger

**Hazard Statement(s):** Causes severe skin burns and eye damage. Causes serious eye damage.

3. Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Common Name</th>
<th>CAS #</th>
<th>Concentration %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td></td>
<td>7732-18-5</td>
<td>98</td>
</tr>
<tr>
<td>Ferric Chloride</td>
<td></td>
<td>10025-77-1</td>
<td>2</td>
</tr>
</tbody>
</table>

4. First Aid Measures

**Eye Contact:** If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention immediately.

**Skin Contact:** If on skin (or hair): Take off immediately all contaminated clothing and wash it before reuse. Wash with plenty of water. If skin irritation occurs: Get medical advice/attention immediately.

**Inhalation:** Remove to fresh air; give artificial respiration if breathing has stopped. Get medical advice/attention if you feel unwell.

**Ingestion:** Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.

**Symptoms:** Irritation eyes, nose, throat; headache, dizziness

**Recommendations for immediate medical care/special treatment:** Get medical advice/attention if you feel unwell.
5. Fire-Fighting Measures

**Extinguishing Media:** Dry chemical, carbon dioxide, alcohol foam, water.

**Fire Hazards (Chemical):** Not flammable.

**Special Protective Equipment:** Firefighters should use self-contained breathing apparatus and protective clothing.

**Precautions for Firefighters:** Carbon monoxide and unidentified organic compounds may be formed during combustion.

6. Accidental Release Measures

**Emergency Procedures:** Evacuate the area of all unnecessary personnel. Wear suitable protective equipment. Eliminate all sources of ignition and provide ventilation.

**Protective Equipment:** See section 8

**Environmental Precautions:** Prevent release to the environment by using barriers.

**Containment and Clean-Up Procedures:** Use barriers to prevent spreading. Collect spill in container. Call waste authorities.

7. Handling and Storage

**Handling:** Do not breathe vapors. Do not eat, drink or smoke when using this product. See section 8 for personal protection measures.

**Storage:** Store locked up. Store in a well-ventilated, cool place. Keep lid tightly closed until ready to use. Do not store in metal container.

8. Exposure Controls/Personal Protection

<table>
<thead>
<tr>
<th>Reagent</th>
<th>CAS #</th>
<th>OSHA PEL TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ferric Chloride</td>
<td>10025-77-1</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**ACGIH Threshold Limit Values (TLVs):**

<table>
<thead>
<tr>
<th>Reagent</th>
<th>CAS #</th>
<th>ACGIH PEL TLV</th>
<th>ACGIH STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ferric Chloride</td>
<td>10025-77-1</td>
<td>1 mg(Fe)/m³</td>
<td></td>
</tr>
</tbody>
</table>

**Engineering Controls:** Use in a well ventilated area to prevent exposure. Maintain eyewash fountain and quick-drench facilities in work areas.

**Personal Protective Measures:** Wear gloves, lab coat, eye protection and impervious footwear. Contact lenses should not be worn when working with this material.

**Special PPE Requirements:** If ventilation hood not available wear respirator.

9. Physical and Chemical Properties Section

**Appearance:** Brown, Brown Liquid

**Molecular Weight:** N/A

**Molecular Formula:** N/A

**pH:** 1.7-1.8

**Boiling Point and Boiling Range:** N/A

**Melting Point/Freezing Point:** N/A

**Flash Point:** N/A

**Specific Gravity/Relative Density:** N/A

**Odor:** N/A

**Odor Threshold:** N/A

**Color:** Brown

**Flammability (solid/gas):** N/A

**Vapor Density:** N/A

**Upper/Lower flammability or explosive limits:** N/A
Ferric Chloride, 2%

- Vapor Pressure: N/A
- Evaporation Rate: N/A
- Partition Coefficient: n-octanol/water: N/A
- Viscosity: N/A
- Auto-ignition temperature: N/A
- Solubility: N/A
- Decomposition Temperature: N/A

### 10. Stability and Reactivity

**Reactivity:**
- **Chemical Stability:** Stable
- **Conditions of Stability/Instability:** Stable under normal conditions of temperature and pressure.
- **Stabilizers needed:** None
- **Safety issue indicated by appearance change:** N/A
- **Other:** N/A

**Hazardous Reactions:** N/A

**Hazardous Polymerization:** Does not occur

**Conditions to avoid:** N/A

**Classes of Incompatible Materials:** Oxidizers, Strong Acids, Strong Bases, may be corrosive to metals.

**Hazardous Decomposition Products:** Thermal-oxidation degradation can produce oxides of carbon. Toxic gases and vapors (i.e. Carbon monoxide) may be released in a fire.

### 11. Toxicological Information

**Likely Routes of Exposure**
- **Eyes:** Corrosive to eyes. May cause permanent damage to corneal and loss of vision. May cause pain, redness, swelling. Very acidic solution.
- **Skin:** Corrosive to skin. May cause permanent damage and scarring. May cause pain, redness and swelling. Very acidic solution.
- **Inhalation:** Dizziness, headache. Corrosive solution, inhalation of vapors may be harmful or irritating.
- **Ingestion:** Corrosive solution. May cause burns to mouth, throat, stomach and digestive tract. May cause nausea.

**Signs or Symptoms of Exposure:** Nausea.

**Effects from short term exposure (delayed, immediate, chronic):** Irritation to the eyes, nose, throat; headache, dizziness, nausea.

**Acute Toxicity (Numerical Measures):** N/A

**Carcinogenicity (NTP, IARC, OSHA):** N/A

### 12. Ecological Information

- **Ecotoxicity:** N/A
- **Persistence and degradability:** N/A
- **Bioaccumulation Potential (octanol-water partition coefficient, BCF):** N/A
- **Mobility in the soil:** N/A
- **Adverse Environmental Effects:** Toxic to aquatic life with long lasting effects.

### 13. Disposal Considerations

**Recommended Disposal Containers:** Check with your local waste authorities

**Recommended Disposal Methods:** Do not dispose of in drains, check with your local waste authorities.

**Physical/Chemical Properties affecting Disposal:** See section 2 and section 9 applicable information.

**Special Precautions for Landfill and Incineration Activities:** Check with your local waste authorities.

**Waste Stream:** Consult your local or regional authorities.
14. Transport Information

UN Number: UN2582
UN Proper Shipping Name: Ferric Chloride Solution
Transport Hazard Class(es): 8
Packing Group Number: III
Environmental Hazards (IMDG code):
  Marine Pollutant: No
Transport in Bulk (IBC Code):
Special Transport Precautions:

15. Regulatory Information

OSHA:
DOT:
EPA:
CPSC:
Ferric Chloride, 2%

16. Other Information

**Revision Date:** 07/10/2015

**NFPA**

| Health | 3 |
| Fire Hazard | 0 |
| Reactivity | 1 |
| Specific Hazard | COR |

**National Fire Protection Association (USA) NFPA**

- **Fire Hazard**
- **Health**
- **Reactivity**
- **Specific Hazard**

**HMIS**

| Health | 3 |
| Flammability | 0 |
| Physical Hazard | 1 |
| Personal Protection | |

**Hazardous Material Information System HMIS**

| Health | 3 |
| Flammability | 0 |
| Physical Hazard | 1 |
| Personal Protection | |

**Notice to Reader:**

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