Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name
EPI Coagulant

Details of the supplier of the safety data sheet
Electrochemical Products Inc.
17000 West Lincoln Ave
New Berlin, WI 53151
Phone: 262-786-9330
Emergency Phone #: Chemtrec #800-424-9300 (CCN7498)
E-mail: us-sales@epi.com
www.epi.com
Fax: 262-786-9403

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.
Acute Toxicity - Oral - Category 4
Skin Corrosion/Irritation - Category 2
Serious Eye Damage/Eye Irritation - Category 1
Hazardous to the Aquatic Environment - Acute - Category 3

GHS Label Elements

Symbol(s)

Signal Word
Danger

Hazard Statement(s)
Harmful if swallowed
Causes skin irritation
Causes serious eye damage
Harmful to aquatic life

Precautionary Statement(s)
Prevention
Safety Data Sheet

Material Name: EPI Coagulant

SDS ID: EPI-0431c

Wear protective gloves/protective clothing/eye protection/face protection
Wash thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid release to the environment

Response
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
Rinse mouth
Immediately call a POISON CENTER or doctor
Specific treatment (see label)

Storage
None needed according to classification criteria

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

Statement of Unknown Toxicity
0% of the mixture consists of ingredient(s) of unknown acute toxicity.

Other Hazards
This product may be severely irritating to corrosive to the eyes and skin. This product may irritate the respiratory tract. Harmful if inhaled or absorbed through the skin. May be harmful or fatal if swallowed.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CAS</th>
<th>Component Name</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>7732-18-5</td>
<td>Water</td>
<td>65-75</td>
</tr>
<tr>
<td>7705-08-0</td>
<td>Iron trichloride</td>
<td>20-25</td>
</tr>
</tbody>
</table>

Section 4 - FIRST AID MEASURES

Inhalation
Allow the victim to rest in a well ventilated area. Monitor for respiratory distress. Seek immediate medical attention.

Skin
If the chemical got onto the clothed portion of the body, remove the contaminated clothes, shoes, and jewelry, protecting your own hands and body. Place the victim under a deluge shower for at least 15...
minutes. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap or epsom salts. If irritation persists, seek medical attention. Wash contaminated clothing before reusing, discard contaminated shoes.

**Eyes**
Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek immediate medical attention.

**Ingestion**
Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. If conscious, give lots of water, milk, or dilute solution of any soluble calcium or magnesium salt to rinse mouth and drink. Seek immediate medical attention.

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**Section 5 - FIRE FIGHTING MEASURES**

**Hazardous Combustion Products**
Oxides of carbon. Irritating and toxic gases may be released during a fire.

**Fire Fighting Measures**
Dry chemical, foam, carbon dioxide, water fog.

**Special Protective Equipment and Precautions for Firefighters**
Firefighters should wear full-face, self contained breathing apparatus and impervious protective clothing. Firefighters should avoid inhaling any combustion products.

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**Section 6 - ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment and Emergency Procedures**
Wear appropriate protective equipment and clothing during clean-up. Isolate area. Keep unnecessary personnel away.

**Environmental Precautions**
Dike the spill with sand or earth. Sweep up and shovel into suitable containers for disposal.

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**Section 7 - HANDLING AND STORAGE**

**Precautions for Safe Handling**
Wash thoroughly after handling.

**Conditions for Safe Storage, Including any Incompatibilities**
None needed according to classification criteria
Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits
ACGIH, NIOSH, EU, OSHA (US) and Mexico have not developed exposure limits for any of this product's components.

Biological limit value
There are no biological limit values for any of this product's components.

Engineering Controls
Use local exhaust ventilation.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection
Safety glasses or chemical goggles. It is generally recognized that contact lenses should not be worn when working with chemicals because they may contribute to the severity of an eye injury.

Skin Protection
The use of rubber gloves, long sleeved shirt and trousers are required.

Respiratory Protection
Wear a dust mask if dust is generated above exposure limits.

Glove Recommendations
The use of rubber gloves is recommended.

Protective Materials
Eye wash fountain and emergency showers are recommended.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>red brown solution</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>32 °F (0 °C)</td>
</tr>
<tr>
<td>Boiling Point Range</td>
<td>Not available</td>
</tr>
<tr>
<td>Autoignition</td>
<td>Not available</td>
</tr>
<tr>
<td>Physical State</td>
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<tr>
<td>Color</td>
<td>red brown</td>
</tr>
<tr>
<td>pH</td>
<td>0 - 1</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>212 °F</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>(Approx. equal to Water)</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not available</td>
</tr>
</tbody>
</table>
Section 10 - STABILITY AND REACTIVITY

Reactivity
Will not occur.

Chemical Stability
This is a stable material.

Possibility of Hazardous Reactions
Will not occur.

Conditions to Avoid
Avoid strong oxidizing agents. Avoid Strong reducing agents. This product may react with strong alkalies. This product may react with light metals (aluminum) to form hydrogen gas.

Incompatible Materials
This product may react with strong reducing agents, metals, and strong bases. Reactive with oxidizing agents.

Hazardous decomposition products
Hydrogen Chloride and Hydrogen gas.

Thermal decomposition products
Carbon monoxide, carbon dioxide and other hydrocarbon fragments.

Section 11 - TOXICOLOGICAL INFORMATION

Acute and Chronic Toxicity

Component Analysis - LD50/LC50
The components of this material have been reviewed in various sources and the following selected endpoints are published:
Water (7732-18-5)
Oral LD50 Rat >90 mL/kg
Iron trichloride (7705-08-0)
Oral LD50 Rat 450 mg/kg

**Immediate Effects**
No information on significant adverse effects.

**Delayed Effects**
No information on significant adverse effects.

**Irritation/Corrosivity Data**
No data available.

**Respiratory Sensitization**
No data available.

**Dermal Sensitization**
No data available.

**Component Carcinogenicity**
None of this product's components are listed by ACGIH, IARC, NTP, DFG or OSHA

**Germ Cell Mutagenicity**
No data available.

**Tumorigenic Data**
No data available.

**Reproductive Toxicity**
No data available.

**Specific Target Organ Toxicity - Single Exposure**
No data available.

**Specific Target Organ Toxicity - Repeated Exposure**
No data available.

**Aspiration hazard**
No data available.

**Medical Conditions Aggravated by Exposure**
No data available.

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**Section 12 - ECOLOGICAL INFORMATION**

**Component Analysis - Aquatic Toxicity**
Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods
Waste must be handled in accordance with all federal, state, provincial, and local regulations. Transport waste material to an authorized waste location, or incinerate under controlled conditions.

Section 14 - TRANSPORT INFORMATION

US DOT Information:
Shipping Name: Ferric Chloride Solution
Hazard Class: 8
UN/NA #: 2582
Packing Group: II
Required Label(s): Corrosive

TDG Information:
Shipping Name: Ferric Chloride Solution
Hazard Class: 8
UN#: 2582
Packing Group: II
Required Label(s): Corrosive

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations
This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS Number</th>
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</thead>
<tbody>
<tr>
<td>Iron trichloride</td>
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</table>

Iron: LC50 96 h Lepomis macrochirus 20.26 mg/L [semi-static]; LC50 96 h Pimephales promelas 20.95 - 22.56 mg/L [semi-static]

Invertebrate: EC50 48 h Daphnia magna 27.9 mg/L IUCLID; EC50 48 h Daphnia magna 9.6 mg/L [static] EPA
CERCLA: 1000 lb final RQ; 454 kg final RQ

All components are on the U.S. EPA TSCA Inventory List. This product is in compliance with TSCA.

SARA Section 311/312 (40 CFR 370 Subparts B and C)
Acute Health: no Chronic Health: no Fire: no Pressure: no Reactivity: no

U.S. State Regulations
The following components appear on one or more of the following state hazardous substances lists:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>CA</th>
<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>PA</th>
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<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
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<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>

Not listed under California Proposition 65

Canada Regulations
This material is not a controlled product under Canadian WHMIS regulations.

Component Analysis - Inventory
Water (7732-18-5)

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<tbody>
<tr>
<td>Yes</td>
<td>DSL</td>
<td>EIN</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
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<td>Yes</td>
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Iron trichloride (7705-08-0)

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<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Section 16 - OTHER INFORMATION

HMIS Rating
Health: 2 Fire: 0 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings
Health: 2 Fire: 0 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Key / Legend
Safety Data Sheet

Material Name: EPI Coagulant
SDS ID: EPI-0431c

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR’s Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH - Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.