

## MATERIAL SAFETY DATA SHEET

### Ferric Chloride -Liquid

#### Section 1 : Chemical Product and Company Identification

**Product Name** : Ferric Chloride - Liquid

**CAS No** : 7705-08-0

**Synonym** : Ferric Chloride, Iron (III) Chloride, Iron Tri Chloride

**Chemical Formula** : FeCl<sub>3</sub>

**Contact Information** Cocreate Global Technologies Private Limited (Scimplify)

FFK Towers, #445, 2nd & 3rd Floor, 17th Cross Road, Sector 4, HSR Layout,  
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#### Section 2 : Composition and Information on Ingredients

##### Composition :

| Name            | CAS#      | % by Weight | Hazardous |
|-----------------|-----------|-------------|-----------|
| Ferric Chloride | 7705-08-0 | 35-45       | Yes       |
| Water           | 7732-18-5 | 55-65       | No        |

# COCREATE GLOBAL TECHNOLOGIES PRIVATE LIMITED

U21009KA2023PTC179006

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## Section 3 : Hazards Identification

### Emergency Overview :

Harmful if swallowed, causes burns, deliquescent.

### Potential Health Effects :

**Eyes** : May cause irritation.

**Skin** : May cause irritation.

**Ingestion** : May cause gastrointestinal discomfort.

**Inhalation**: May cause irritation to respiratory tract.

## Section 4 : First Aid Measures

### Emergency and First Aid Procedures :

**Eyes** : Flush with water for at least 15 minutes, raising and lowering eyelids occasionally.  
Get medical attention if irritation persists.

**Skin** : Thoroughly wash exposed area for at least 15 minutes. Remove contaminated clothing.  
Launder contaminated clothing before reuse. Get medical attention if irritation persists.

**Ingestion** : If swallowed, if conscious, give plenty of water and induce vomiting immediately as  
directed by medical personnel. Immediately call a physician or poison control center.  
Never give anything by mouth to an unconscious person.

**Inhalation** : Remove to fresh air. Give oxygen if breathing is difficult; give artificial respiration if  
breathing has stopped. Keep person warm, quiet, and get medical attention.

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## Section 5 : Fire and Explosion Data

### Flash Point (Method Used) :

|               |            |                |   |                        |
|---------------|------------|----------------|---|------------------------|
| NFPA Rating : | Health     | :              | 3 | 2 - Moderate           |
|               | Fire       | :              | 0 | 0 - None               |
|               | Reactivity | :              | 2 | 2 - Moderate           |
|               | Personal   | :              |   | 3 - Severe (Corrosive) |
| Protection :  | J          | Contact Rating | : | )                      |

### Extinguisher Media :

Use dry chemical, CO<sub>2</sub> or appropriate foam.

Flammable Limits in Air % by Volume : N/A

Autoignition Temperature : N/A

### Special Firefighting Procedures :

Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.

### Unusual Fire and Explosion Hazards :

Dissociates at high temperatures to form Ferrous Chloride and toxic and corrosive chlorine gas.

Liberates hydrochloric acid fumes when damp.

## Section 6 : Accidental Release Measures

### Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. If necessary: Neutralize the residue with a dilute solution of sodium carbonate.

### Large Spill:

Corrosive solid.

Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed.

Call for assistance on disposal. Neutralize the residue with a dilute solution of sodium carbonate.

Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

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## Section 7 : Handling and Storage

### Handling:

Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Use only in a chemical fume hood.

### Storage:

Store in a cool, dry place. Store in a tightly closed container. Corrosives area.

## Section 8 : Exposure Controls / Personal Protection

### Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

### Personal Protection:

Splash goggles. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

### Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor and dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

### Exposure Limits:

TWA: 1 CEIL: 2 (mg/m<sup>3</sup>)

Consult local authorities for acceptable exposure limits.

## Section 9 : Physical and Chemical Properties

|                    |                            |
|--------------------|----------------------------|
| Physical State     | : Liquid                   |
| Appearance         | : Dark Brown Liquid        |
| Odor               | : Slightly Acidic          |
| Molecular Weight   | : 162.21 g/mole            |
| Molecular Formula  | : FeCl <sub>3</sub>        |
| Solubility         | : Soluble in Water         |
| pH (1% Soln/water) | : 2 (Acidic)               |
| Specific Gravity   | : 1.38 to 1.42             |
| Boiling Point      | : 316 deg C (600.80 deg F) |
| Melting Point      | : 306 deg C (582.80 deg F) |
| Vapor Pressure     | : 1hPa@20 deg C            |

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## Section 10 : Stability and Reactivity Data

**Chemical Stability:** Stable.

**Conditions to Avoid:**

Incompatible materials, dust generation, excess heat, exposure to moist air or water.

**Incompatibilities with Other Materials:**

Strong oxidizing agents, alkali metals, allyl chloride, ethylene oxide, potassium, sodium.

**Hazardous Decomposition Products:** Hydrogen chloride, oxides of iron

**Hazardous Polymerization:** Will not occur

## Section 11 : Toxicological Information

**Routes of Entry:**

Eye contact. Inhalation. Ingestion.

**Toxicity to Animals:**

Acute oral toxicity (LD50): 900 mg/kg [Rat].

**Chronic Effects on Humans:**

The substance is toxic to lungs, mucous membranes.

**Other Toxic Effects on Humans:**

Very hazardous in case of ingestion.

Hazardous in case of skin contact (irritant), of inhalation.

Slightly hazardous in case of skin contact (permeator).

## Section 12 : Ecological Information

**Ecotoxicity** : Not available.

**BOD5 and COD** : Not available.

**Products of Biodegradation:**

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:**

The products of degradation are more toxic.

**Special Remarks on the Products of Biodegradation:** Not available.

## Section 13 : Disposal Considerations

**Waste Disposal Methods :**

Dispose in accordance with all applicable Federal, State and Local regulations.

Always contact a permitted waste disposer (TSD) to assure compliance.

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## Section 14 : Transport Information

### DOT

Shipping Name : Ferric Chloride - Liquid  
Hazard Class : 8  
UN Number : 2582  
Packing Group : III

### IMO

Shipping Name : Ferric chloride solution  
Hazard Class : Corrosive material, 8  
UN Number : 2582  
IMO Label : Corrosive  
Packaging Group : III  
Shipping Containers: Rubber-lined steel tank cars/trucks; polyethylene drums, bottles  
Storage Conditions : Keep containers closed

## Section 15 : Regulatory Information

|               |            |   |              |
|---------------|------------|---|--------------|
| NFPA Rating : | Health     | : | 2 - Moderate |
|               | Fire       | : | 0 - None     |
|               | Reactivity | : | 2 - Moderate |

0 = Insignificant

1 = Slight

2 = Moderate

3 = High

4 = Extreme

Carcinogenicity Lists: No

NTP:

No

IARC Monograph: No

OSHA Regulated: No

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## Section 16 : Other Information

Label Hazard Warning:

**DANGER! CORROSIVE. CAUSES BURNS TO ANY AREA OF CONTACT. HARMFUL  
IF SWALLOWED OR INHALED. AFFECTS THE LIVER.**

\*\*\*\*\*

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 herewith, 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 responsibility for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

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