

MATERIAL SAFETY DATA SHEET

FERRIC CHLORIDE LIQUID 40-42%

1. PRODUCT IDENTIFICATION

Common Name : Ferric Chloride
 Chemical Family..... : Inorganic Salt
 Chemical Name of major constituent..... : Ferric Chloride
 Formula..... : FeCl₃
 Molecular Weight..... : 162.25
 UN Number..... : 2582
 Exposure Limits :
 OSHA TLV : 1mg/m³ (8 hours) TWA (as soluble iron salts)
 ACGIH TLV : 1mg/m³ (8 hours) TWA (as soluble iron salts)
 NIOSH recommended : 1mg/m³ (8 hours) TWA (as soluble iron salts)
 Uses:- Potable and waste water treatment, odor removal, adhesive for dye, textile impression pigment, ink and photoengraving.

2. PHYSICAL AND CHEMICAL PROPERTIES

Physical State : Liquid
 Appearance : Reddish Brown
 Melting/Freezing Point.. : -50°C (-58°F)
 Boiling Point..... : 105-110°C (220°F – 230°F)
 Odor..... : Slight Pungent Odor
 Vapour Pressure : N.A.
 Specific Gravity (H₂O)..... : 1.40 min.
 Flash Point..... : Non-flammable
 Flammability Limit..... : N.A.
 Solubility in water..... : Infinite
 pH..... : < 1
 Chemical Property :
 Stability : Stable Hazardous
 Decomposition..... : Produces HCl Hazardous
 Polymerization..... : Does not occur Incompatible
 Materials : Metals and alloys
 Condition to avoid : Extensive heat, contact with strong mineral acids and base or alkalis.
 Maximum use limit..... : 500 mg/L

3. COMPOSITION

CHEMICAL NAME	CAS NUMBER	WEIGHT %
FeCl ₃	7705-08-0	42% min.
FeCl ₂	7758-94-3	< 0.5 %
HCl	7647-01-0	< 0.5 %

4. EXPOSURE CONTROL/PERSONAL PROTECTION

PERSONAL PROTECTION :

Ventilation : There should be enough local ventilation to keep the TLV below ACGIH limits.
 Respirator : Use an approved respirator with acid mist cartridges, if necessary.
 Eye Protection : Wear chemical goggles or face shields.
 Gloves : Use neoprene or equivalent. Never use leather.
 Clothing : Protective clothing if necessary, should be neoprene of equivalent.

Other

When cleaning, maintenance or any other situations when airborne contaminants and/or dust could be generated, use protective equipment to protect against ingestion or inhalation.

5. FIRST AID MEASURES

Skin contact : Wash with soap and water. Remove any contaminated clothing and wash before reuse. If irritation or illness develops, seek medical attention.
 Eye contact : Flush eyes thoroughly with water for at least 15 minutes, taking care to keep eye lids opened to be sure that the rinsing is complete. Get medical attention.
 Inhalation : Move to fresh air. Give artificial respiration if breathing has stopped. If breathing is difficult, give oxygen. Get medical attention.
 Ingestion : If conscious, drink water or milk of magnesia. **DO NOT induce vomiting** and do not give bicarbonate to neutralize. Get medical attention.

6. FIRE FIGHTING MEASURES

Flash Point and Method Not Applicable.
 GENERAL HAZARD : This product is not flammable, but exposing to high temperature may produce Hydrogen Chloride vapours.
 Extinguishing Media : Use water spray, fog, foam, dry chemical, CO₂ or other agents as appropriate for surrounding fire.
 Special Fire Fighting Procedure : Wear self contained breathing apparatus and full protective clothing as appropriate for surrounding fire. Cool exterior of storage tanks.

7. ACCIDENTAL RELEASE MEASURES

Wear appropriate protective gear (See Section 4).
 Contain and eliminate the release in order to prevent contamination of land or water way; neutralize with lime, lime stone or soda ash. This will generate CO₂, so additional ventilation may be necessary. Collect the residue for proper disposal or flush with water in accordance with applicable regulations to waste treatment system.

8. HAZARD IDENTIFICATION :

Ecological Information : Not available.
 Principal Risk : WHMIS – Class E. Irritating to skin, eyes and mucous membranes.
 Potential Effects on Health : Acute and Chronic.
 Carcinogenicity : Does not contain any carcinogens or potential carcinogens.

9. DISPOSAL CONSIDERATIONS

This material exhibits the RCRA characteristic of corrosivity. Ferric Chloride for disposal should be flushed out with plenty of water to dilute the solution

10. TRANSPORT INFORMATION

Shipping Name : Ferric III Chloride Solution
 Hazardous Class : 8 (9.2)
 DOT Number : UN 2582
 IMDG Code Page No. : 8173
 Packing Group : III

11. HANDLING AND STORAGE

Wear appropriate protective equipment (See Section 4). Store away from heat, strong alkalies and alkali metals. Keep containers closed and dry. Protect container from physical damage. Use handling equipment (pumps, hoses, etc.) compatible with product, ie., polyethylene, polypropylene, PVC, Teflon, rubber, FRP and titanium. Avoid contact with bare metals other than titanium. Wash thoroughly after handling. Emptied container may retain vapour and product residue.