



## MATERIAL SAFETY DATA SHEET (MSDS)

### SECTION 1: Identification

#### 1.1 Product identifiers

**Product Name :** Ferric Chloride

**Cat No.:**

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

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses :** Laboratory chemicals, Industrial & for professional use only

#### 1.3 Details of the supplier of the safety data sheet

**Company :** Krishna Solvechem Limited.  
B/503, Shayog, S. V. Road,  
Kandivali (West), Mumbai – 400067. India.

**Telephone :** +91-22-6123 0222

**Email :** exports@kscl.co.in

#### 1.4 Emergency telephone number

**Emergency Phone :** +91-8657457330

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008**

Corrosive to metals	(Category 1), H290
Acute toxicity, Oral	(Category 4), H302
Skin irritation	(Category 2), H315
Serious eye damage	(Category 1), H318
For the full text of the H-Statements mentioned in this Section, see Section 16.	

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Xn Harmful R22, R38, R41

For the full text of the R-phrases mentioned in this Section, see Section 16.

#### 2.2 Label elements

**Labelling according Regulation (EC) No 1272/2008**

**Pictogram :**



Corrosive to metals

**Signal word**

Danger

**Hazard statement (s)**

**H290**

May be corrosive to metals.

**H302**

Harmful if swallowed.



**H315**

Causes skin irritation.

**H318**

Causes serious eye damage.

**Precautionary statement (s) P280**

Wear protective gloves/eye protection/ face protection.

**P305 + P351 + P338**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Supplemental Hazard Statements**

None

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3: Composition / information on ingredients

### 3.1

#### Substances:

Synonyms	Formula	Molecular weight	CAS-No	EC-No.
Ferric chloride	Cl <sub>3</sub> Fe	162.20 g/mol	7705-08-0	231-729-4

#### Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	CAS-No.	EC-No.	Classification	Concentration
Iron trichloride	7705-08-0	231-729-4	Met. Corr. 1; Acute Tox. 4;	98% Minimum
			Skin Irrit. 2; Eye Dam. 1;	
			H290, H302, H315, H318	

#### Hazardous ingredients according to Directive 1999/45/EC

Component	CAS-No.	EC-No.	Classification	Concentration
Iron trichloride	7705-08-0	231-729-4	Xn, R22 - R38 - R41	98% Minimum

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

**General advice :**

Consult a physician. Show this safety data sheet to the doctor



	in attendance.
<b>If inhaled :</b>	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
<b>In case of skin contact :</b>	Wash off with soap and plenty of water. Consult a physician.
<b>In case of eye contact :</b>	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
<b>If swallowed :</b>	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
<b>4.2 Most important symptoms and effects, both acute and delayed:</b>	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
<b>4.3 Indication of any immediate medical attention and special treatment needed :</b>	No data available
<b>SECTION 5: Firefighting measures</b>	
<b>5.1 Extinguishing media</b>	
<b>Suitable extinguishing media :</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<b>5.2 Special hazards arising from the substance or mixture :</b>	No data available.
<b>5.3 Advice for firefighters :</b>	Wear self-contained breathing apparatus for firefighting if necessary.
<b>5.4 Further information :</b>	No data available
<b>SECTION 6: Accidental release measures</b>	
<b>6.1 Personal precautions, protective equipment and emergency procedures</b>	
	Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.
<b>6.2 Environmental precautions</b>	
	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
<b>6.3 Methods and materials for containment and cleaning up</b>	
	Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.
<b>6.4 Reference to other sections</b>	
	For disposal see section 13.



## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

Store under inert gas. Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

hygroscopic

Storage class (TRGS 510): Combustible, corrosive hazardous materials.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Components with workplace control parameters

### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment -

##### Eye / Face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

##### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

##### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

##### Control of environmental exposure



Prevent further leakage or spillage if safe to do so. Do not let product enter drains.  
Discharge into the environment must be avoided.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Appearance	Form: Solid
b) Odour	No data available
c) Odour Threshold	No data available
d) pH	No data available
e) Melting point / freezing point	Melting point/range: 304 °C - lit.
f) Initial boiling point and boiling range	No data available
g) Flash point	No data available
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	< 1 hPa at 20 °C 1 hPa at 194 °C
l) Vapour density	5,60 - (Air = 1.0)
m) Relative density	2,800 g/cm <sup>3</sup>
n) Water solubility	No data available
o) Partition coefficient: n octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

### 9.2 Other safety information

Relative vapour density	5,60 - (Air = 1.0)
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## SECTION 10: Stability and Reactivity

10.1 Reactivity :	No data available
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<b>10.2 Chemical stability :</b>	Stable under recommended storage conditions
<b>10.3 Possibility of hazardous reactions :</b>	No data available
<b>10.4 Conditions to avoid :</b>	No data available
<b>10.5 Incompatible materials:</b>	Strong oxidizing agents, Potassium, Alkali metals, Bases, Exothermic in contact with water, Forms shock - sensitive mixtures with certain other materials.
<b>10.6 Hazardous decomposition products :</b>	Other decomposition products - No data available In the event of fire: see section 5

## SECTION 11: Toxicological information

<b>11.1 Information on toxicological effects</b>	
<b>Acute toxicity:</b>	LD50 Oral - Mouse - 1.300 mg/kg LD50 Dermal - Rabbit - > 2.000 mg/kg (OECD Test Guideline 402)
<b>Skin corrosion / irritation :</b>	Skin - Rabbit Result: Irritating to skin.
<b>Serious eye damage/eye irritation :</b>	Skin - Rabbit Result: Severe eye irritation.
<b>Respiratory or skin sensitization :</b>	No data available
<b>Germ cell mutagenicity:</b>	No data available
<b>Carcinogenicity :</b>	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
<b>Reproductive toxicity:</b>	No data available
<b>Specific target organ toxicity - single exposure :</b>	No data available
<b>Specific target organ toxicity - repeated exposure :</b>	No data available
<b>Aspiration hazard :</b>	No data available
<b>Additional Information:</b>	RTECS: LJ9100000
<p>spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Overdose of iron compounds may have a corrosive effect on the gastrointestinal mucosa and be followed by necrosis, perforation, and stricture formation. Several hours may elapse before symptoms that can include epigastric pain, diarrhea, vomiting, nausea, and hematemesis occur. After apparent recovery a person may experience metabolic acidosis, convulsions, and coma hours or days later. Further complications may develop leading to acute liver necrosis that can result in death due to hepatic coma., To the best of our knowledge, the chemical, physical, and toxicological properties have not been</p>	



thoroughly investigated.

## SECTION 12: Ecological information

<b>12.1 Toxicity</b>	Toxicity to fish: LC50 - Pimephales promelas (fathead minnow) - 21,84 mg/l - 96 h Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna (Water flea) – 9,6mg/l – 48 h
<b>12.2 Persistence and degradability</b>	
<b>Biodegradability</b>	No data available
<b>12.3 Bioaccumulative potential :</b>	No data available
<b>12.4 Mobility in soil :</b>	No data available
<b>12.5 Results of PBT and vPvB assessment</b>	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
<b>12.6 Other adverse effects :</b>	No data available

## SECTION 13: Disposal considerations

<b>13.1 Waste treatment methods</b>	
<b>Product :</b>	Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
<b>Contaminated packaging:</b>	Dispose of as unused product.

## SECTION 14: Transport information

<b>14.1 UN number :</b>	ADR/RID: 1773 IMDG: 1773 IATA: 1773
<b>14.2 UN proper shipping name</b>	
<b>ADR/RID :</b>	FERRIC CHLORIDE
<b>IMDG :</b>	FERRIC CHLORIDE
<b>IATA :</b>	Ferric chloride
<b>14.3 Transport hazard class(es)</b>	ADR/RID: 8                      IMDG: 8                      IATA: 8
<b>14.4 Packaging group:</b>	ADR/RID: III                      IMDG: III                      IATA: III
<b>14.5 Environmental hazards:</b>	ADR/RID: yes                      IMDG Marine pollutant: yes                      IATA: no
<b>14.6 Special precautions for user :</b>	No data available



## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

### 15.2 Chemical safety assessment :

For this product a chemical safety assessment was not carried out

## SECTION 16: Other information

### 16.1 Full text of H-Statements referred to under sections 2 and 3.

<b>Acute Tox.</b>	Acute toxicity
<b>Eye Dam</b>	Serious eye damage
<b>H290</b>	May be corrosive to metals.
<b>H302</b>	Harmful if swallowed.
<b>H315</b>	Causes skin irritation.
<b>H318</b>	Causes serious eye damage
<b>Met. Corr</b>	Corrosive to metals
<b>Skin Irrit</b>	Skin irritation

### 16.2 Further information:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Krishna Solvechem Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.kscl.co.in](http://www.kscl.co.in) for additional terms and conditions of sale.