



Safety Data Sheet

Revision: C
Date of Issue: 30.10.2024

1. IDENTIFICATION

Chemical name : **Ferric Chloride 38%**

Chemical synonym : Iron (III) Chloride Solution

Chemical family : End Chlorine

CAS number : 7705-08-0

Formula : FeCl_3

Molecular weight : 162.2 (100% Basis)

Manufacturer's name and address (head office) : Chemical Industries (Far East) Limited
3 Jalan Samulun Jurong Town Singapore 629127
Tel: 6265 0411 Fax: 6265 6690
Email: chemical.ind@cil.com.sg

Emergency telephone number : 6265 0411

2. HAZARDS IDENTIFICATION

GHS Classification

Eye irritation : Category 2
Skin irritation : Category 3

GHS Label



Symbol : Corrosive

Signal word : Warning

Hazard statements : H290 Corrosive to most metals
H302 Harmful if swallowed
H316 Causes mild skin irritation
H320 Causes eye irritation
H373 May cause dermatitis through prolonged exposure



Precautionary statements:

General

P102 Keep out of reach of children

Prevention

P202 Do not handle until all safety precautions have been read and understood

P234 Keep only in original container

P264 Wash thoroughly after handling

P280 Wear protective gloves/protective clothing/eye protection/face protection/rubber boots

Response

P390 Absorb spillage to prevent material damage

P302+P353 IF ON SKIN: Rinse skin with plenty of water

P332+P313 If skin irritation occurs: Get medical advice/attention

P306+P362 IF ON CLOTHING: Take off contaminated clothing and wash before reuse

P305+P351 IF IN EYES: Rinse cautiously with water for several minutes

P337+P313 If eye irritation persists: Get medical advice/attention

P302+P331+P313 IF SWALLOWED: do NOT induce vomiting. Get medical advice/attention

Storage

P404 Store in a closed container

Disposal

P501 Dispose of contents/containers in accordance to Singapore regulations

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS No	Percent	Hazardous
Ferric Chloride	7705-08-0	32% - 45%	Yes
Water	7732-18-5	55% - 68%	No

4. FIRST AID MEASURES

Skin contact	:	Rinse skin with plenty of water. Take off contaminated clothing and wash before re-use. Seek medical attention if there's skin irritation
Eye contact	:	Rinse cautiously with water for several minutes. If eye irritation persists, get medical advice/attention.
Inhalation	:	Remove to fresh air. If breathing is difficult, give artificial respiration. Obtain medical attention when necessary.
Ingestion	:	Do not induce vomiting and get medical advice/attention. If the person is conscious, give water, milk or milk of magnesia



5. FIRE FIGHTING MEASURES

Flash point (closed cup) :	Non-applicable
Explosion limit lower :	Non-applicable
upper :	Non-applicable
Auto-ignition temperature :	Non-applicable
Extinguishing media :	Use water spray, fog, foam, dry chemical, CO ₂ or other agents as appropriate for surrounding fire
Fire-fighting measures :	Since no fire or explosion hazards exist directly from FeCl ₃ , fire-fighting equipment suitable for surrounding fire should be provided. Firefighters should wear protective equipment and self-contained breathing apparatus with full facepiece operated in a positive pressure mode

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken :	Any spill or leakage should be reported to the safety personnel. Wear full personal protective clothing, rubber gloves and boots. Prevent further leakage and contain the spillage whenever it is safe to do so. For small amount, flush with large amount of water. For large amount, render harmless by neutralising with alkali e.g. hydrated lime. Collect and contain the neutralised material for proper disposal.
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*Note: Inform Civil Defence/Fire Brigade/Police for further assistance if necessary

7. HANDLING AND STORAGE

Usual Shipping containers :	Hard rubber lined steel tankers, HDPE drums/ carboys/IBCs.
Handling instructions :	Keep containers closed. Handle containers with care. Use handling equipments (pumps, hoses etc) compatible with product i.e. polyethylene, polypropylene, PVC, Teflon, rubber, FRP and titanium. Avoid contact with bare metals other than titanium. Avoid contact with eyes and skin. Wash thoroughly after handling. Always remove contaminated clothing and wash before reuse. Containers remain hazardous when empty since they retain product residues.
Storage instructions :	Do not use metal containers. Isolate from incompatible substances (see also Section 10). Observe all warnings for the product. Keep away from source of heat.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation requirements :	Room ventilation is sufficient
Respiratory protection :	Not necessary
Eye protection :	Safety goggles/face shield are recommended



Hand protection : Rubber gloves are recommended

Other protective equipment: Rubber boots, chemical coat, long-sleeved shirt, eye bath, safety shower

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Dark brown liquid

Odour : Mild

Boiling point : 104°C – 117°C (219°F - 243 °F)

Freezing point : -9°C to -6°C (16°F - 21 °F)

Specific gravity : 1.32 – 1.51

Vapour density (Air = 1) : Non-applicable

Vapour pressure : 40 mm Hg

Evaporation rate : Non-applicable

Percent volatiles : Non-applicable

Solubility in water : Very soluble

10. STABILITY AND REACTIVITY

Stability : Stable

Conditions to avoid : Heat

Incompatible substances to avoid : Metals / alkali metals / metal oxides / metal hydroxides/ strong alkalis, strong oxidizing agents such as Hydrogen Peroxide, conc. Sulfuric acid, conc. Nitric acid

Hazardous decomposition products : Hydrogen chloride

Hazardous polymerisation : Will not occur

11. TOXICOLOGICAL INFORMATION

Toxicological information : None of the components of this material are listed as a carcinogen.



12. ECOLOGICAL INFORMATION

Environmental Fate : No information found
Environmental Toxicity : No Information found

13. DISPOSAL CONSIDERATIONS

Waste disposal method : Neutralise and dispose in accordance to all applicable environmental regulations. We recommend that either authorities-in-charge or approved waste disposal companies be contacted for advice on proper disposal methods.

14. TRANSPORT INFORMATION

Correct technical name : Ferric Chloride Solution
Label : Corrosive
UN number : 2582
Hazchem code : 2X
IMDG/IATA class : 8
Packing group : III

15. REGULATORY INFORMATION

(Based on hazard ratings of 0 to 4 : 0 = No hazard; 4 = Extreme hazard)
Saf-T-Data (TM) System
☐ Health : 2 (Moderate)
☐ Flammability : 0 (No hazard)
☐ Reactivity : 2 (Moderate)
☐ Contact : 3 (Severe; Corrosive)
☐ Storage colour code : White (Corrosive)

NFPA Ratings
☐ Health (Blue) : 3
☐ Flammability (Red) : 0
☐ Reactivity (Yellow) : 0
☐ Specific hazard (White) : Blank
☐ Precautionary label statement : Corrosive

16. OTHER INFORMATION

This safety data sheet has been prepared by Chemical Industries (Far East) Limited. This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Chemical Industries (Far East) Limited cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. If clarification or further information is needed, the user should contact Chemical Industries (Far East) Limited at the contact details on page 1. Chemical Industries (Far East) Limited responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.