



Safety Data Sheet

Date of Issue: 03.09.2024

Date of Expiry: 03.09.2029

1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name : ECP Limited
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Product Name	Iron (III) Chloride Hexahydrate
Product Code	28408
CAS No.	10025-77-1

Recommended use : Laboratory Investigations

2: Hazard's identification

2.1 GHS Classification

Acute toxicity, Oral (Category 4)
Skin corrosion/irritation (Category 2)
Serious eye damage/eye irritation (Category 1)

2.2 GHS Label elements, including precautionary statements

Pictogram



DANGER

Hazard Statements

H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.

Precautionary Statements

Prevention

P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/ eye protection/ face protection.

Response

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

Disposal

P501 Dispose of contents/ container to an approved waste disposal plant.

3: Composition/information on ingredients

3.1 Substances

Synonyms	:	Ferric chloride hexahydrate
Formula	:	Cl ₃ Fe · 6H ₂ O
Molecular weight	:	270.30 g/mol
CAS-No.	:	10025-77-1
EC-No.	:	231-729-4

4: First aid measures

4.1 Description of first-aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Hydrogen chloride gas

Iron oxides

Not combustible.

Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

7: Handling and storage

7.1 Precautions for safe handling

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store under inert gas.

Tightly closed. Dry.

hygroscopic

Storage class

Storage class (TRGS 510): 13: Non Combustible Solids

7.3 Specific end use(s)

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

8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits Table

Component	CAS No.	Value	Control parameters	Basis
Iron trichloride hexahydrate	10025-77-1	WES-TWA	1mg / m ³	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants

8.2 Exposure controls

Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment

Eye/face protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.

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 or 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.

9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	:	Solid
Appearance	:	Brownish-yellow or orange crystals or powder.
Odour	:	Usually slight odour of hydrogen chloride.
Melting Point	:	~37 °C
Boiling Point	:	280 - 285 °C (760 mm Hg)
Solubility in Water	:	Soluble in water
Solubility in Organic Solvents	:	Readily soluble in alcohol, acetone and ether.
Specific Gravity	:	1.82
pH	:	~1.8 (10 g/l, H ₂ O, 25 °C)
Vapour Pressure	:	1 mm Hg (194 °C)
Partition Coefficient: Log P(o/w)	:	-4 (24 °C)(anhydrous substance)
n-octanol/water	:	
Flammability	:	Non combustible material.
Molecular Weight	:	270.30

10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Risk of explosion with:

Alkali metals

Ethylene oxide

10.4 Conditions to avoid

Exposure to moisture.

no information available

10.5 Incompatible materials

Mild steel Metals

10.6 Hazardous decomposition products

In the event of fire: see section 5

11: Toxicological information

11.1 Information on toxicological effects

Ingestion

Ingestion of material is corrosive causing severe burns to the mouth, throat and stomach. Symptoms include sore throat, diarrhoea, nausea, vomiting, gastrointestinal discomfort. Pink urine discoloration is a strong indicator of iron poisoning. Liver damage, coma, and death may follow, sometimes delayed as long as three days. Symptoms of the ingestion of large amounts may be delayed for several hours and can include epigastric pain, haematemesis, drop in blood pressure and possible circulatory failure. Hours or days after apparent recovery metabolic acidosis, convulsions and coma may occur. If the patient survives, symptoms of acute liver necrosis may develop and could lead to death due to hepatic coma.

Inhalation

Inhalation of material is extremely destructive to the mucous membranes and upper respiratory tract. Symptoms may include burning sensation, irritation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

Skin

Corrosive. Skin contact causes irritation, redness, pain and severe burns. May be harmful if absorbed through the skin.

Eye

Corrosive. Contact can cause blurred vision, redness, pain and severe tissues burns. Risk of serious damage to eyes.

Respiratory Sensitization

Not classified based on available information.

Skin Sensitization

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Reproductive Toxicity

Not classified based on available information.

STOT – Single exposure

Not classified based on available information.

STOT – Repeat exposure

Not classified based on available information.

Health Hazard

Cardiovascular disorders result after absorption of large quantities.

Chronic Effects

Repeated ingestion may cause liver and kidney damage. Prolonged exposure of the eyes may cause discoloration.

Mutagenicity

Not classified based on available information.

12: Ecological information

12.1 Toxicity

No data available

12.2 Persistence and degradability

Methods for the determination of biodegradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Behaviour in environmental compartments:

Distribution: log P(o/w): -4 (24 °C) (anhydrous substance).

No bioaccumulation is to be expected (log P(o/w)<1).

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

Product reacts with water.

The following may develop after reaction of the product with water :

hydrochloric acid

Discharge into the environment must be avoided.

13: Disposal considerations

13.1 Waste treatment methods

Product

Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.

14: Transport Information Table

		ADR/RID – European packaging certification	IMDG International Maritime Dangerous Goods Code	IATA – DGR International Air Travel Association – Dangerous Goods Regulations
14.1	UN Number	3260	3260	3260
14.2	UN Proper Shipping name	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. - (Iron (III) chloride hexahydrate)	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. - (Iron (III) chloride hexahydrate)	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. - (Iron (III) chloride hexahydrate)
14.3	Transport Hazard Class	8	8	8
14.4	Packaging group	III	III	III

Other regulations

Hazchem Code : 2X

15: Regulatory information

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

National regulatory information

HSNO Approval Code: HSR004016

HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits Group

Standard 2006

Tracking Required: not required

Approved Handler Cert.: not required

16: Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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