

1. Identification of the substance/preparation and of the company/undertaking**1.1 Identification of the product****Product number:** I6014**Name of material:** Iron (III) Chloride Hexahydrate**CAS No.:** 10025-77-1**1.2 Recommended use and restriction on use**

General use : For experimental, research and industrial use

Restriction on use : Never drink, Not used except for experimental, research and industrial applications.

1.3 Manufacturer / Supplier / Distributor information**Importer/distributors identification**

Company : ASIA CHEMIE (THAILAND) CO., LTD.

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2. Hazards identification**2.1 GHS Classification**

Acute toxicity (oral) : Category4

Acute Toxicity (Inhalation: dust / mist) : Category4

Serious eye damage/irritation : Category1

2.2 GHS label elements**Hazard symbols****Signal word**

- Danger

Hazard Statements

- H302 Harmful if swallowed

- H318 Causes serious eye damage

- H332 Harmful if inhaled

Precautionary Statements

- P261 Avoid breathing dust/fume.

- P264 Wash hands thoroughly after handling.

- P270 Do not eat, drink or smoke when using this product.

- P271 Use only outdoors or in a well-ventilated area.

- P280 Wear protective gloves/protective clothing/eye protection/face protection.

- P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

- P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

- P310 Immediately call a POISON CENTER or doctor/physician.

- P312 Call a POISON CENTER or doctor/physician if you feel unwell.

- P330 Rinse mouth.

- P501 Dispose of contents/container in accordance with local/regional/national/international regulation

2.3 Other hazards which do not result in classification : (NFPA Classification)**NFPA grade (0 ~ 4 level)**

- Health : 2 , Flammability : 0, Reactivity : 0

3. Composition/information on ingredients

Chemical Name	Synonyms	CAS Number	Concentration %
Ferric chloride hexahydrate	-	10025-77-1	100

4. First aid measures

4.1 Eye contact

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.
- Get medical attention immediately.
- Remove contact lenses if worn.

4.2 Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Wash contaminated clothing thoroughly before re-using.

4.3 Inhalation contact

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.
- If breathing is stopped or irregular, give artificial respiration and supply oxygen.

4.4 Ingestion contact

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.

4.5 Delayed and immediate effects and also chronic effects from short and long term exposure

- Not available

4.6 Notes to physician

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.

5. Fire-fighting measures

5.1 Suitable (Unsuitable) extinguishing media

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray
- Avoid use of water jet for extinguishing

5.2 Specific hazards arising from the chemical

- Not available

5.3 Special protective actions for firefighters

- Keep unauthorized personnel out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- In case of conflagration, use automatic fire sprinkler. Major fire may require withdrawal, allowing the object itself to burn.
- Avoid inhalation of materials or combustion by-products.
- Do not approach the tank surrounded by fire until it is extinguished.
- Keep containers cool with water spray.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Wear proper personal protective apparatus as indicated in Section 8 and avoid skin contact and inhalation.
- Ventilate closed spaces before entering.
- Do not touch spilled material. Stop leak if you can do it without risk.
- Handle the damaged containers or spilled material after wearing appropriate protective equipment
- Avoid skin contact and inhalation.

6.2 Environmental precautions

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.

6.3 Methods and materials for containment and cleaning up

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notify the central and local government if the emission reach the standard threshold.
- Disposal of waste shall be in compliance with the Wastes Control Act.
- Appropriate container for disposal of spilled material collected.
- Small liquid state spills: Appropriate container for disposal of spilled material collected.
- Put the spilled material in an appropriate containers and clean the contaminated area

7. Handling and storage

7.1 Precautions for safe handling

- Avoid direct physical contact.
- Avoid contact with incompatible materials.
- Comply with all applicable laws and regulations for handling.

- Refer to Engineering controls and personal protective equipment.

7.2 Conditions for safe storage, including any incompatibilities

- Do not apply direct heat.
- Store according to current laws and regulations
- Do not apply any physical shock to container.
- Keep in the original container.
- Collected them in sealed containers.
- Do not eat, drink or smoke when using this product

8. Exposure controls/personal protection

8.1 Exposure limits

ACGIH TLV

- Not available

OSHA PEL

- Not available

8.2 Engineering controls

Business owner is recommended to maintain below recommended exposure limits for the working place with general exhaust of gas/vapour/mist/fume

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection

- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
- Respiratory protection is ranked in order from minimum to maximum.
- Consider warning properties before use.
- Dust, mist, fume-purifying respiratory protection.
- Air-purifying respirator with high-efficiency particulate filtering.
- Any respiratory protection with a electromotion fan(for dust, mist, fume-purifying).
- Self-contained breathing apparatus with a corpuscle filter of high efficiency.
- For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

Eye protection

- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
- Provide an emergency eye wash station and quick drench shower in the immediate work area.

Hand protection

- Wear appropriate glove.

Skin protection

- Wear appropriate clothing.

Others

- Not available

9. Physical and chemical properties

A. Appearance	
- Appearance	Solid (Other)
- Color	yellow to brown
B. Odor	Not available
C. Odor threshold	Not available
D. pH	2 (0.1M solution)
E. Melting point/Freezing point	37 °C
F. Initial Boiling Point/Boiling Ranges	282.5 °C
G. Flash point	Not available
H. Evaporation rate	Not available
I. Flammability (solid, gas)	Not available
J. Upper/Lower Flammability or explosive limits	Not available
K. Vapour pressure	66 mmHg (at 264°C)

L. Solubility	800000 mg/l
M. Vapour density	9.32
N. Specific gravity (Relative density)	1.653-2.90 (at 25 °C)
O. Partition coefficient of n-octanol/water	Not available
P. Autoignition temperature	Not available
Q. Decomposition temperature	Not available
R. Viscosity	Not available
S. Molecular weight	270.32

10. Stability and reactivity

10.1 Chemical Stability

- This material is stable under recommended storage and handling conditions.

10.2 Possibility of hazardous reactions

- Hazardous Polymerization will not occur.

10.3 Conditions to avoid

- Avoid contact with incompatible materials and condition.
- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces

10.4 Incompatible materials

- Not available

10.5 Hazardous decomposition products

- May emit flammable vapour if involved in fire.

11. Toxicological information

11.1 Information on the likely routes of exposure

Respiratory tracts

- Not available

Oral

- Harmful if swallowed

Eye • Skin

- Causes serious eye damage

11.2 Delayed and immediate effects and also chronic effects from short and long term exposure

Acute toxicity

* Oral

- [Ferric chloride hexahydrate] : LD50 440 mg/kg Rat (Read-across CAS No. 7705-08-0)

* Dermal

- [Ferric chloride hexahydrate] : LD50 > 2000 mg/kg Rat (OECD TG 402)

* Inhalation

- [Ferric chloride hexahydrate] : Dust LC50 > 1.1 mg/l 4 hr Rat (Read-across CAS No. 10028-22-5)

Skin corrosion/irritation

- Not available

Serious eye damage/irritation

- Causes serious eye damage

Respiratory sensitization

- Not available

Skin sensitization

- Not available

Carcinogenicity

* IARC

- Not available

* OSHA

- Not available

* ACGIH

- Not available

* NTP

- Not available

* EU CLP

- Not available
- Germ cell mutagenicity**
- Not available
- Reproductive toxicity**
- Not available
- STOT-single exposure**
- Not available
- STOT-repeated exposure**
- Not available
- Aspiration hazard**
- Not available

12. Ecological information

12.1 Ecotoxicity

Fish

- Not available

Crustaceans

- Not available

Algae

- Not available

12.2 Persistence and degradability

Persistence

- Not available

Degradability

- Not available

12.3 Bioaccumulative potential

Bioaccumulative potential

- Not available

Biodegradation

- Not available

12.4 Mobility in soil

Not available

12.5 Other adverse effects

Not available

13. Disposal considerations

13.1 Disposal methods

- Stabilization and minimization treatment by incineration or similar method can be applied, if more than two kinds of designated wastes are in mixture state and it is impractical to separate them
- Oil water separation technology shall be applied as pre-waste treatment if it is applicable
- It shall be treated by incineration

13.2 Special precautions for disposal

- Anyone with business license number who generates industrial wastes shall treat the waste by him/herself or by entrusting to the legal entities who treat the wastes, recycle the wastes of others or install and operate the waste treatment facilities according to the Wastes Control Act
- Dispose of waste in accordance with all applicable laws and regulations.

14. Transport information

14.1 UN No. (IMDG CODE/IATA DGR)

- 1773

14.2 Proper shipping name

- FERRIC CHLORIDE, ANHYDROUS

14.3 Hazard Class

- 8

14.4 IMDG CODE/IATA DGR Packing group

- III

14.5 Marine pollutant

- Not applicable

14.6 Special precautions for user related to transport or transportation measures

- Local transport follows in accordance with Dangerous goods Safety Management Law.

- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE : F-A (General fire schedule)
- EmS SPILLAGE SCHEDULE : S-B (Corrosive substances)

15. Regulatory information

15.1 National and/or international regulatory information

POPs Management Law

- Not applicable

Information of EU Classification

* Classification

- Not applicable

U.S. Federal regulations

* OSHA PROCESS SAFETY (29CFR1910.119)

- Not applicable

* CERCLA Section 103 (40CFR302.4)

- Not applicable

* EPCRA Section 302 (40CFR355.30)

- Not applicable

* EPCRA Section 304 (40CFR355.40)

- Not applicable

* EPCRA Section 313 (40CFR372.65)

- Not applicable

Rotterdam Convention listed ingredients

- Not applicable

Stockholm Convention listed ingredients

- Not applicable

Montreal Protocol listed ingredients

- Not applicable

16. Other information

Reason for the revision: General update.

Date: 10/5/2014

Revision #3

Date: 09/12/2020

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