



Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

Product identifier:

Product name: Iron(III)chloride,6-hydrate

SDS No. : 4067E-2

Details of the supplier of the safety data sheet

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

Address: 3-1, Honmachibashi, Chuo-ku, Osaka, JAPAN

Division: Safety Management Dept. of Chemicals

Telephone number: +81-6-6946-8061

FAX: +81-6-6946-1607

e-mail address: kagakuhinanzenkanri@kishida.co.jp

2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

HEALTH HAZARDS

Acute toxicity (Oral): Category 4

Skin corrosion/irritation: Category 1

Serious eye damage/eye irritation: Category 1

Specific target organ toxicity – single exposure: Category 1(systemic toxicity)

Specific target organ toxicity – single exposure: Category 3 (Respiratory tract irritation)

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment (Acute): Category 3

(Note) GHS classification without description: Not classified/Classification not possible

Label elements



Signal word: Danger

HAZARD STATEMENT

Harmful if swallowed

Causes severe skin burns and eye damage

Causes serious eye damage

Causes damage to organs after single exposure(systemic toxicity)

May cause respiratory irritation

Harmful to aquatic life

PRECAUTIONARY STATEMENT

Prevention

Avoid release to the environment.

Do not breathe dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Wash contaminated parts thoroughly after handling.

Wear protective gloves, protective clothing or face protection.

Wear eye protection/face protection.

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

Response

IF INHALED: Remove person to fresh air and keep comfortable for breathing.



IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Wash contaminated clothing before reuse.

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

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

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Storage

Store in a well-ventilated place. Keep container tightly closed.

Disposal

Dispose of contents/container in accordance with local/national regulation.

3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name:Iron(III)chloride,6-hydrate

Content (%):97(min)

Chemical formula:FeCl₃•6H₂O

Chemicals No, Japan:1-213

CAS No.:10025-77-1

MW:270.29

Note : The figures shown above are not the specifications of the product.

4. First-aid measures

Descriptions of first-aid measures

IF INHALED

Remove person to fresh air and keep comfortable for breathing.

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

IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water/shower.

If skin irritation or rash occurs: Get medical advice/attention.

IF IN EYES

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

If eye irritation persists: Get medical advice/attention.

IF SWALLOWED

Rinse mouth. Do NOT induce vomiting.

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

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

Unsuitable extinguishing media data is not available.

Specific hazards arising from the substance or mixture

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters



Wear fire/flame resistant/retardant clothing.
Wear protective gloves/protective clothing/eye protection/face protection.
Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Ventilate area until material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

Methods and materials for containment and cleaning up

Sweep up, place in a bag and hold for waste disposal.

Preventive measures for secondary accident

Collect spillage.

7. Handling and storage

Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Protective measures against fire and explosion)

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures

Use only outdoors or in a well-ventilated area.

Wear protective gloves, protective clothing or face protection.

Wear eye protection/face protection.

When using do not eat, drink or smoke.

Any incompatibilities

See "10.Stability and Reactivity"

Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.

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

Wash contaminated clothing before reuse.

Storage

Conditions for safe storage

Keep container tightly closed.

Store in a cool, dry place. Do not store in direct sunlight.

Container and packaging materials for safe handling

Glass

Polyethylene



8. Exposure controls/personal protection

Control parameters

Adopted value

(Iron(III)chloride,6-hydrate)

ACGIH(1990) TWA: 1mg-Fe/m³ (URT & skin irr)

Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

Individual protection measures

Respiratory protection

Wear respiratory protection.

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Crystalline granule

Color: Yellow to brown

Odor: Slightly characteristic odor

pH: 2.0 (0.1mol/L solution,20°C)

Boiling point or initial boiling point data is not available.

Boiling range data is not available.

Melting point/Freezing point: 37°C

Decomposition temperature data is not available.

Flammability (gases, liquids and solids) data is not available.

Flash point data is not available.

Auto-ignition temperature data is not available.

Lower and upper explosion limit/flammability limit data is not available.

Vapor pressure data is not available.

Relative vapor density (Air=1) data is not available.

Density and/or relative density data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: Soluble (47.9%,20°C)

n-Octanol/water partition coefficient data is not available.

No Particle characteristics data is not available.

10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Deliquescent material.

Possibility of hazardous reactions

(As Iron(III)chloride, anhydrous)

Decomposes above 200° C . This produces toxic and corrosive gases including chlorine and hydrogen chloride. Decomposes on contact with water. This produces hydrogen chloride. The solution in water is a medium strong acid. Reacts violently with alkali metals, allyl



chloride, ethylene oxide, styrene and bases. This generates explosion hazard. Attacks metal. This produces flammable/explosive gas (hydrogen). (ICSC 1499)

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Bases, Alkali metals, Allyl chloride, Ethylene oxide, Styrene, Metals

Hazardous decomposition products

Chlorine, Hydrogen chloride, Hydrogen

11. Toxicological Information**Information on toxicological effects****Acute toxicity****Acute toxicity (Oral)**

[Company proprietary data]

(Iron(III)chloride,6-hydrate)

(As Iron(III)chloride,anhydride)

rat LD50=500~5000mg/kg

Irritant properties**Skin corrosion/irritation**

[Company proprietary data]

(Iron(III)chloride,6-hydrate)

(As Iron(III)chloride,anhydride)

Strong oxidant agent. 0.1M solution is pH2 (HSDB (Access on September 2014)).

Serious eye damage/irritation

[Company proprietary data]

(Iron(III)chloride,6-hydrate)

(As Iron(III)chloride,anhydride)

Strong oxidant agent. 0.1M solution is pH2 (HSDB (Access on September 2014)).

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

Carcinogenic effects data is not available.

Reproductive toxicity data is not available.

STOT**STOT-single exposure**

[cat.1]

[Company proprietary data]

(Iron(III)chloride,6-hydrate)

(As Iron(III)chloride,anhydride) systemic toxicity (HSDB (Access on September 2014), SIDS (2008), ACGIH (7th, 2001))

[cat.3 (resp. irrit.)]

[Company proprietary data]

(Iron(III)chloride,6-hydrate)

Respiratory tract irritation (ACGIH (7th, 2001), SIDS (2008), HSDB (Access on September 2014))

STOT-repeated exposure data is not available.

Aspiration hazard data is not available.



12. Ecological Information

Ecotoxicity

Aquatic toxicity

Harmful to aquatic life

Aquatic acute toxicity component(s) data

[Company proprietary data]

(Iron(III)chloride,6-hydrate)

(As Iron(III)chloride,anhydride)

Crustacea(Daphnia magna) LC50=37.5mg/L/48hr

Persistence and degradability

Persistence and degradability data is not available.

Bioaccumulative potential

Bioaccumulative potential data is not available.

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

Waste treatment methods

Avoid release to the environment (- if this is not the intended use).

Dispose of contents/container in accordance with local/national regulation.

14. Transport Information

UN No.: 3260

Proper Shipping Name :

CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.

Class or division : 8

Packing group : III

ERG GUIDE No.: 154

Special provisions No.: 223; 274

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 3260

Proper Shipping Name :

CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.

Class or division : 8

Packing group : III

Special provisions No.: 223; 274

IATA Dangerous Goods Regulations

UN No.: 3260

Proper Shipping Name :

CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.

Class or division : 8

Hazard labels : Corrosive

Packing group : III

Special provisions No.: A3; A803

Environmental hazards

MARPOL Annex III - Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no



15. Regulatory Information

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

US major regulations

TSCA

Iron(III)chloride,6-hydrate

Other regulatory information

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

16. Other information

GHS classification and labelling

Acute Tox. 4: H302 Harmful if swallowed

Skin Corr. 1: H314 Causes severe skin burns and eye damage

Eye Dam. 1: H318 Causes serious eye damage

STOT SE 1: H370 Causes damage to organs after single exposure

STOT SE 3: H335 May cause respiratory irritation

Aquatic Acute 3: H402 Harmful to aquatic life

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (6th ed., 2015), UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN

IMDG Code, 2018 Edition (Incorporating Amendment 39-18)

IATA Dangerous Goods Regulations (60th Edition) 2019

Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012)

2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2019 TLVs and BEIs. (ACGIH)

<http://monographs.iarc.fr/ENG/Classification/index.php>

Supplier's data/information

General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data (NITE published in 2018).