



## Safety Data Sheet

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

Product identifier:

Product name: Zinc chloride

SDS No. : 87721E-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: Chemical Safety Management Department

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(respiratory system)

**ENVIRONMENT HAZARDS**

Hazardous to the aquatic environment (Acute): Category 1

Hazardous to the aquatic environment (Long-term): Category 1

Label elements



Signal word: Danger

**HAZARD STATEMENT**

Harmful if swallowed

Causes severe skin burns and eye damage

Causes damage to organs(respiratory system)

Very toxic to aquatic life with long lasting effects

**PRECAUTIONARY STATEMENT**

**Prevention**

Avoid release to the environment.

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

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**

Collect spillage.

IF exposed or concerned: Call a POISON CENTER/doctor/physician.

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 or 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/doctor/physician if you feel unwell.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Disposal

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

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### 3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name:Zinc chloride

Content (%):98(min)

Chemical formula:ZnCl<sub>2</sub>

Chemicals No, Japan:1-264

CAS No.:7646-85-7

MW:136.30

ECNO:231-592-0

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

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### 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/doctor/physician if you feel unwell.

IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water or 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/doctor/physician if you feel unwell.

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### 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

Unsuitable extinguishing media

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 resistant or flame 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.

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#### 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.

Avoid raising dust.

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.

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#### 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, hot surfaces, sparks, open flames and other ignition sources. No smoking.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures

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.

Keep under lock and key.

Container and packaging materials for safe handling

Glass

Polyethylene



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## 8. Exposure controls/personal protection

### Control parameters

#### Adopted value

(Zinc chloride)

ACGIH(1992) TWA: 1mg/m<sup>3</sup>

STEL: 2mg/m<sup>3</sup> (LRT & URT irr)

#### OSHA-PEL

(Zinc chloride)

TWA: 1mg/m<sup>3</sup>

### 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.

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## 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

Physical state: Crystalline powder or lump

Color: White

Odor: Odorless

Melting point/Freezing point: 290°C

Boiling point or initial boiling point: (Zinc chloride)732°C

Boiling range data is not available.

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

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

Flash point data is not available.

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

pH data is not available.

Kinematic viscosity data is not available.

#### Solubility:

Solubility in water: 432g/100ml (25°C)

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

Vapor pressure data is not available.

Density and/or relative density: 2.9 g/cm<sup>3</sup>

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

Particle characteristics data is not available.

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## 10. Stability and Reactivity

### Reactivity

Not available.

### Chemical stability

Hygroscopic (absorbs moisture from the air).

### Possibility of hazardous reactions



Decomposes on heating. This produces toxic fumes of hydrogen chloride and zinc oxide. The solution in water is a medium strong acid. Reacts violently with strong oxidants and strong bases. This generates fire and explosion hazard. This produces toxic and corrosive fumes. (ICSC 1064)

**Conditions to avoid**

Contact with incompatible materials.  
Contact with fire source.

**Incompatible materials**

Strong bases, Strong oxidizing agents

**Hazardous decomposition products**

Hydrogen chloride, Zinc oxide

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

[GHS Cat. Japan, base data]  
(Zinc chloride)  
rat LD50=1100mg/kg (EU-RAR, 2004)

**Irritant properties****Skin corrosion/irritation**

[GHS Cat. Japan, base data]  
(Zinc chloride)  
rabbit severe (EU-RAR, 2004)

**Serious eye damage/irritation**

[GHS Cat. Japan, base data]  
(Zinc chloride)  
human permanent corneal scarring (EU-RAR, 2004)

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]  
[GHS Cat. Japan, base data]  
(Zinc chloride)  
respiratory system (PATTY 6th, 2012)

STOT-repeated exposure data is not available.

Aspiration hazard data is not available.

**Information on other hazards**

May cause lung disorders by massive inhalation of powdered substance.  
-e.g. fibrosis of lung tissue, cough, sputum, breath shortness, dyspnea, decline of lung function, interstitial lung disease, pneumothorax

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**12. Ecological Information****Ecotoxicity****Aquatic toxicity**

Very toxic to aquatic life with long lasting effects  
Hazardous to the aquatic environment (Acute)  
[GHS Cat. Japan, base data]  
(Zinc chloride)



Algae (Nitzschia) EC50=0.135mg/L/72hr (EHC 221, 2001; NITE Initial Risk Assessment Report, 2008)

Hazardous to the aquatic environment (Long-term)

[GHS Cat. Japan, base data]

(Zinc chloride)

Algae (Pseudokirchneriella subcapitata) NOEC=0.0325mg/L/72hr (EU-RAR, 2010)

Water solubility

(Zinc chloride)

432 g/100 ml (25°C) (ICSC, 2002)

Persistence and degradability

Persistence and degradability data is not available.

Bioaccumulative potential

(Zinc chloride)

BCF=178 (Check & Review, Japan)

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

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### 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.

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

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### 14. Transport Information

UN No. or ID No.: 2331

UN Proper Shipping Name :

ZINC CHLORIDE, ANHYDROUS

Class or division (Transport hazard class) : 8

Packing group : III

ERG GUIDE No.: 154

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 2331

Proper Shipping Name :

ZINC CHLORIDE, ANHYDROUS

Class or division : 8

Packing group : III

IATA Dangerous Goods Regulations

UN No.: 2331

Proper Shipping Name :

ZINC CHLORIDE, ANHYDROUS

Class or division : 8

Hazard labels : Corrosive

Packing group : III

Special provisions No.: A803

Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : yes

MARPOL Annex V – Prevention of pollution by garbage discharge

Hazardous to the aquatic environment – acute hazard: cat.1



Zinc chloride  
Hazardous to the aquatic environment – long-term hazard: cat.1, 2  
Zinc chloride

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#### 15. Regulatory Information

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

Chemicals listed in TSCA Inventory

Zinc chloride

Other regulatory information

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

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#### 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

STOT SE 1: H370 Causes damage to organs

Aquatic Chronic 1: H410 Very toxic to aquatic life with long lasting effects

Reference Book

Globally Harmonized System of classification and labelling of chemicals, UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 21th edit., 2019 UN

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

IATA Dangerous Goods Regulations (62nd Edition) 2021

2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2021 TLVs and BEIs. (ACGIH)

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 2020).