

## Safety Data Sheet

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

#### Product identifier:

Product name: Zinc Chloride

Reference number(SDS):18012jis\_E1-3

#### Relevant identified uses of the substance or mixture and uses advised against

Uses advised against: This product conform to JSQI(Japanese Standards of Quasi-drug Ingredients).

Do not use for other purposes.

#### Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

Address: 1-6, Ohmano-cho, Koshigaya-shi, Saitama 343-0844, Japan

Division: Quality Assurance Department

Telephone number: +81-48-986-6161

FAX: +81-48-989-2787

e-mail address: shiyaku-t@junsei.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

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

#### Label elements



Signal word: Danger

#### HAZARD STATEMENT

H302-Harmful if swallowed

H314-Causes severe skin burns and eye damage

H318-Causes serious eye damage

H370-Causes damage to organs after single exposure

H400-Very toxic to aquatic life

H410-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.

Wear respiratory protection.(as specified by the manufacturer/supplier or the competent authority.)

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.

Immediately call a POISON CENTER or doctor/physician.

IF EXPOSED OR CONCERNED: Call a POISON CENTER or 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/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 locked up.

#### 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 (%): 95.0 <

Chemical formula:  $Cl_2Zn$

Chemicals No, Japan: 1-264

CAS No.: 7646-85-7

MW: 136.32

ECNO: 231-592-0

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### 4. First-aid measures

#### Descriptions of first-aid measures

##### General measures

Immediately call a POISON CENTER or doctor/physician.

Keep victim warm and quiet.

Call emergency medical service.

##### IF INHALED

Remove person to fresh air and keep comfortable for breathing.

Give artificial respiration if victim is not breathing.

Administer oxygen if breathing is difficult.

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.

Remove and isolate contaminated clothing and shoes.

For minor skin contact, avoid spreading material on unaffected skin.

##### 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.

If victim is conscious, give 1 – 2 glasses of water.

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

Most important symptoms and effects, both acute and delayed

(Symptoms when inhalation or ingestion)

Cough. Sore throat. Burning sensation. Laboured breathing. Shortness of breath. Abdominal pain.

Nausea. Vomiting. Shock or collapse.

✕Inhalation of fumes may cause lung oedema.

(Symptoms when skin and/or eye contact)

Pain. Redness. Severe deep burns.

Indication of any immediate medical attention and special treatment needed

The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort.

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## 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

The product is non-flammable.

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.

Runoff from fire control or dilution water may cause pollution.

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.

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## 6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Keep unauthorized personnel away.

In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.

Ventilate area until material pick up is complete.

Wear proper protective equipment.

PUBLIC SAFETY: Ventilate closed spaces before entering.

EVACUATION : Spill: See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

Environmental precautions

Avoid release to headsprings, rivers, lakes, ocean and groundwater.

Methods and materials for containment and cleaning up

Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

Preventive measures for secondary accident

Collect spillage.

Stop leak if you can do it without risk.

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Prevent entry into waterways, sewers, basements or confined areas.

Keep out of low areas.

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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/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

Wear protective gloves, protective clothing or face protection.

Wear eye protection/face protection.

Use personal protective equipment as required.

When using do not eat, drink or smoke.

#### Any incompatibilities

Strong bases, Strong oxidizing agents should not be mixed with the chemicals.

#### 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

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

Keep cool. Protect from sunlight.

Store locked up.

Container and packaging materials for safe handling data is not available.

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## 8. Exposure controls/personal protection

### Control parameters

Control value in MHLW is not available.

#### Adopted value

Adopted value in JSOH is not available.

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

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

Consult with your glove and/or personnel equipment manufacturer for selection of appropriate compatible materials.

##### Eye protection

Wear chemical safety goggle.

Wear eye/face protection.

Skin and body protection

Wear impervious clothing and boots in case of repeated or prolonged treatment.

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## 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Crystalline powder or solid

Color: White

Odor: None

Odor threshold data is not available.

Melting point/Freezing point: 290°C

Boiling point or initial boiling point: 732°C

Boiling range data is not available.

Flammability (gases, liquids and solids): Non-flammable

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

Flash point: Non-flammable

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

Self-Accelerating Decomposition Temperature/SADT data is not available.

pH: ca. 5 (100g/L, 20°C)

Dynamic viscosity data is not available.

Kinematic viscosity data is not available.

Solubility:

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

Solubility in solvent: Free soluble in ethanol.

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

Vapor pressure data is not available.

Vapor density data is not available.

VOC data is not available.

Evaporation rate data is not available.

Density and/or relative density: 2.907g/cm<sup>3</sup>(25°C)

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

Relative density of the Vapor/air - mixture at 20°C (Air = 1) data is not available.

Critical temperature data is not available.

No Particle characteristics data is not available.

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## 10. Stability and Reactivity

Reactivity

Runaway polymerization will not occur.

Chemical stability

Stable under normal storage/handling conditions.

Hygroscopic.

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.

Conditions to avoid

Contact with incompatible materials.

Heat. Moisture.

Incompatible materials

Strong bases, Strong oxidizing agents

Hazardous decomposition products  
Zinc oxides, Chlorides

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## 11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]

rat LD50=1100mg/kg (EU-RAR, 2004)

Labor standard law, Japan; Toxic

Zinc chloride

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]

rabbit : severe (EU-RAR, 2004)

Serious eye damage/irritation

[GHS Cat. Japan, base data]

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]

respiratory system (PATTY 6th, 2012)

STOT-repeated exposure data is not available.

Aspiration hazard data is not available.

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## 12. Ecological Information

Ecotoxicity

Aquatic toxicity

H400-Very toxic to aquatic life

H410-Very toxic to aquatic life with long lasting effects

Hazardous to the aquatic environment (Acute)

[GHS Cat. Japan, base data]

Algae (Nitzschia) EC50=0.135mg/L/72hr (EHC 221, 2001; NITE primary risk assessment, 2008)

Hazardous to the aquatic environment (Long-term)

[GHS Cat. Japan, base data]

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

Water solubility

432 g/100 ml (25°C) (ICSC, 2002)

Persistence and degradability

Persistence and degradability data is not available.

Bioaccumulative potential

BCF=178 (Registered chemicals data 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 (- if this is not the intended use).

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

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**14. Transport Information**

UN No., UN CLASS

UN No.: 2331

Proper Shipping Name : ZINC CHLORIDE, ANHYDROUS

Class or division : 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

Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : yes

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**15. Regulatory Information**

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

Environmental hazards

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

Basel law, Japan

Zinc chloride

US Federal Regulations

Chemicals listed in TSCA Inventory

Zinc chloride

Other regulatory information

We are not able to check up the regulatory information with regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility.

Regulatory information with regard to this substance in your country or in your region should be examined by your own responsibility.

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

Regulatory information in this section are limited to intentional ingredient(s), but does not contain information on non-intentional ingredients or impurities which are not informed by supplier(s).

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**16. Other information****GHS classification and labelling**

- H302–Acute Tox. 4: H302 Harmful if swallowed
- H314–Skin Corr. 1: H314 Causes severe skin burns and eye damage
- H318–Eye Dam. 1: H318 Causes serious eye damage
- H370–STOT SE 1: H370 Causes damage to organs after single exposure
- H400–Aquatic Acute 1: H400 Very toxic to aquatic life
- H410–Aquatic Chronic 1: H410 Very toxic to aquatic life with long lasting effects

**Reference Book**

- Globally Harmonized System of classification and labelling of chemicals, (7th revised edition, 2017), UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN IMDG Code, 2018 Edition (Incorporating Amendment 39–18)
- IATA Dangerous Goods Regulations (61th Edition) 2020
- Classification, labelling and packaging of substances and mixtures (Table 3 ECNO6182012)
- 2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
- 2020 TLVs and BEIs. (ACGIH)
- <http://monographs.iarc.fr/ENG/Classification/index.php>
- JIS Z 7252 : 2019
- JIS Z 7253 : 2019
- 2019 Recommendation on TLVs (JSOH)
- Supplier's data/information
- Chemicals safety data management system "GHS Assistant" Version 4.09 (<https://www.asahi-ghs.com/>)
- NITE Chemical Risk Information Platform "NITE-CHRIP"  
([https://www.nite.go.jp/en/chem/chrip/chrip\\_search/systemTop](https://www.nite.go.jp/en/chem/chrip/chrip_search/systemTop))
- GHS Classification Guidance for Enterprises 2019 Revised Edition (Ver. 2.0) (Mar. 2020, METI)

**Definitions and Abbreviations**

- SDS (Safety Data Sheet)
- LD50 (Lethal Dose, 50%)
- LC50 (Lethal Concentration, 50%)
- IARC (International Agency for Research on Cancer)
- ACGIH (American Conference of Governmental Industrial Hygienists)
- EPA (US Environmental Protection Agency)
- NTP (US National Toxicology Program)
- JSOH (Japan Society for Occupational Health)
- EU (European Union)
- EC50 (Effective Concentration, 50%)
- NOEC (No Observed Effect Concentration)
- BOD (Biochemical Oxygen Demand)
- COD (Chemical Oxygen Demand)
- BCF (Bioconcentration Factor)
- anh (anhydride)

**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 2019).