



## Safety Data Sheet

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

#### Product identifier:

Product name: Zinc, powder

SDS No. : 87573E-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

##### PHYSICAL AND CHEMICAL HAZARDS

Substances and mixtures which, in contact with water, emit flammable gases: Category 2

##### HEALTH HAZARDS

Serious eye damage/eye irritation: Category 2B

##### 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

In contact with water releases flammable gases

Causes eye irritation

Very toxic to aquatic life

Very toxic to aquatic life with long lasting effects

#### PRECAUTIONARY STATEMENT

##### Prevention

Avoid release to the environment.

Do not allow contact with water.

Handle under inert gas/appropriate liquid or gas. Protect from moisture.

Wash contaminated parts thoroughly after handling.

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

##### Response

In case of fire: Use appropriate media other than water for extinction.

Collect spillage.

IF ON SKIN: Brush off loose particles from skin. Immerse in cool water.

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.

**Storage**

Store in a dry place. Store in a closed container.

**Disposal**

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

**Specific Physical and Chemical hazards**

May catch fire or form flammable gas in contact with water.

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**3. Composition/information on ingredients****Mixture/Substance selection:****Substance**

Ingredient name:Zinc

Content (%):90(min)

Chemical formula:Zn

CAS No.:7440-66-6

MW:65.409

ECNO:231-175-3

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 or doctor/physician if you feel unwell.

**IF ON SKIN (or hair)**

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

IF ON SKIN: Brush off loose particles from skin. Immerse in cool water.

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.

Call a POISON CENTER or 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 data is not available.

**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

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

(Protective measures against fire and explosion)

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

Do not allow contact with water.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

#### Safety Measures

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

Handle under inert gas/appropriate liquid or gas. Protect from moisture.

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.

### Storage

#### Conditions for safe storage

Keep container tightly closed.

Store in a dry place. Store in a closed container.

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

#### Container and packaging materials for safe handling

Glass

Polyethylene

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## 8. Exposure controls/personal protection

### Control parameters

### 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: Powder  
Color: Gray to blue  
Odor: Odourless  
Melting point/Freezing point: 419°C  
Boiling point or initial boiling point: (Zinc)907°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: (Zinc)460°C  
Decomposition temperature data is not available.  
pH data is not available.  
Kinematic viscosity data is not available.  
Solubility:  
    Solubility in water: Reaction  
n-Octanol/water partition coefficient data is not available.  
Vapor pressure data is not available.  
Density and/or relative density: 7.1g/cm<sup>3</sup>  
Relative vapor density (Air=1) data is not available.  
No Particle characteristics data is not available.

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## 10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

Ignites in air when finely divided. If dry, it can be charged electrostatically by swirling, pneumatic transport, pouring, etc.  
On combustion forms zinc oxide fumes. See Notes. The substance is a strong reducing agent.  
It reacts violently with oxidants, acids and bases. Reacts with water. This produces flammable/explosive gas (hydrogen). Reacts violently with sulfur, halogenated hydrocarbons and many other substances. This generates fire and explosion hazard. (ICSC 1205)

Conditions to avoid

Contact with incompatible materials.  
Contact with fire source.

Incompatible materials

Acids, Bases, Oxidizing agents, Water, Sulfur, Halogenated hydrocarbons

Hazardous decomposition products

Zinc oxide, Hydrogen



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## 11. Toxicological Information

Information on toxicological effects

Acute toxicity data is not available.

Irritant properties

Skin corrosion/irritation data is not available.

Serious eye damage/irritation

[GHS Cat. Japan, base data]

(Zinc)

rabbit mild irritation (NITE primary risk assessment, 2007)

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 data is not available.

STOT-repeated exposure data is not available.

Aspiration hazard data is not available.

Additional data

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

Very toxic to aquatic life with long lasting effects

Hazardous to the aquatic environment (Acute)

[GHS Cat. Japan, base data]

(Zinc)

Algae (*Pseudokirchneriella subcapitata*) ErC50=0.15mg/L/72hr (EHC 221, 2001)

Water solubility

(Zinc)

reaction (ICSC, 1994)

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.

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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.: 1436  
Proper Shipping Name :  
ZINC POWER or ZINC DUST  
Class or division : 4.3  
Subsidiary hazard(s) : 4.2  
Packing group : II  
ERG GUIDE No.: 138

**IMDG Code (International Maritime Dangerous Goods Regulations)**

UN No.: 1436  
Proper Shipping Name :  
ZINC POWER or ZINC DUST  
Class or division : 4.3  
Subsidiary hazard(s) : 4.2  
Packing group : II

**IATA Dangerous Goods Regulations**

UN No.: 1436  
Proper Shipping Name :  
ZINC POWER or ZINC DUST  
Class or division : 4.3  
Subsidiary hazard(s) : 4.2  
Hazard labels : Dang. when wet & Spont. comb.  
Packing group : II  
Special provisions No.: A3; 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  
Hazardous to the aquatic environment – long-term hazard: cat.1, 2  
Zinc

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**15. Regulatory Information**

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

**US Federal Regulations**

Chemicals listed in TSCA Inventory

Zinc

**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**

Water-react. 2: H261 In contact with water releases flammable gases  
Eye Irrit. 2B: H320 Causes eye irritation  
Aquatic Acute 1: H400 Very toxic to aquatic life  
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>  
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 2019).