

## SAFETY DATA SHEET

According to JIS Z 7253:2012  
**Revision Date** 19-Aug-2019  
 Version 2.01

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

<b>Product name</b>	Zinc
<b>Product code</b>	267-00095
<b>CAS RN</b>	7440-66-6
<b>Formula</b>	Zn
<b>Manufacturer</b>	FUJIFILM Wako Pure Chemical Corporation 1-2 Doshomachi 3-Chome Chuo-ku, Osaka 540-8605, Japan Phone: +81-6-6203-3741 Fax: +81-6-6203-5964
<b>Supplier</b>	FUJIFILM Wako Pure Chemical Corporation 1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan Phone: +81-6-6203-3741 Fax: +81-6-6203-2029
<b>Emergency telephone number</b>	+81-6-6203-3741 / +81-3-3270-8571
<b>Recommended uses and restrictions on use</b>	For research purposes

## Section 2: HAZARDS IDENTIFICATION

**GHS classification****Classification of the substance or mixture**

**Serious eye damage/eye irritation**

Category 2B

**Aquatic environment (acute hazard)**

Category 1

**Aquatic environment (long-term hazard)**

Category 1

**Pictograms**

**Signal word**

Warning

**Hazard statements**

H320 - Causes eye irritation

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

**Precautionary statements-(Prevention)**

- Wash face, hands and any exposed skin thoroughly after handling
- Avoid release to the environment

**Precautionary statements-(Response)**

- 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.
- Collect spillage

**Precautionary statements-(Storage)**

- Not applicable

**Precautionary statements-(Disposal)**

- Dispose of contents/container to an approved waste disposal plant

**Others**

**Other hazards** Not available

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

**Single Substance or Mixture** Substance

**Formula** Zn

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS RN
Zinc	=<100	65.409	N/A	N/A	7440-66-6

**Impurities and/or Additives :** Not applicable

### Section 4: FIRST AID MEASURES

**Inhalation**

Remove to fresh air. If symptoms persist, call a physician.

**Skin contact**

Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

**Eye contact**

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

**Ingestion**

Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Do not induce vomiting without medical advice.

**Protection of first-aiders**

Use personal protective equipment as required.

### Section 5: FIRE FIGHTING MEASURES

**Suitable extinguishing media**

dry sand, dry diatomaceous earth, dry slaked lime

**Unsuitable extinguishing media**

Do not use straight streams

**Special extinguishing method**

No information available

**Specific hazards arising from the chemical product**

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

**Protection of fire-fighters**

Use personal protective equipment as required. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

### Section 6: ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

For indoor, provide adequate ventilation process until the end of working. Deny unnecessary entry other than the people involved by, for example, using a rope. While working, wear appropriate protective equipments to avoid adhering it on skin, or inhaling the gas. Work from windward, and retract the people downwind.

**Environmental precautions**

To be careful not discharged to the environment without being properly handled waste water contaminated.

**Methods and materials for contaminant and methods and materials for cleaning up**

Sweep up and gather scattered particles, and collect it in an empty airtight container.

**Recoverly, neutralization**

No information available

**Secondary disaster prevention measures**

Clean contaminated objects and areas thoroughly observing environmental regulations.

**Section 7: HANDLING AND STORAGE****Handling****Technical measures**

Avoid contact with acidic substances Use with local exhaust ventilation.

**Precautions**

Do not rough handling containers, such as upsetting, falling, giving a shock, and dragging. Prevent leakage, overflow, and scattering. Not to generate steam and dust in vain. Seal the container after use. After handling, wash hands and face, and then gargle. In places other than those specified, should not be smoking or eating and drinking. Should not be brought contaminated protective equipment and gloves to rest stops. Deny unnecessary entry of non-emergency personnel to the handling area.

**Safety handling precautions**

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

**Storage****Safe storage conditions****Storage conditions**

Store away from sunlight in well-ventilated place at room temperature (preferably cool).  
Keep container tightly closed.

**Safe packaging material**

Glass

**Incompatible substances**

Acids, Strong oxidizing agents

**Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****Engineering controls**

In case of indoor workplace, seal the source or use a local exhaust system. Provide the safety shower facility, and hand- and eye-wash facility. And display their position clearly.

**Exposure limits**

Chemical Name	JSOH (Japan)	ISHL (Japan)	ACGIH
Zinc 7440-66-6	5 mg/m <sup>3</sup>	N/A	N/A

**Personal protective equipment****Respiratory protection**

Dust mask

**Hand protection**

Protection gloves

**Eye protection**

protective eyeglasses or chemical safety goggles

**Skin and body protection**

Long-sleeved work clothes

**General hygiene considerations**

Handle in accordance with good industrial hygiene and safety practice.

**Section 9: PHYSICAL AND CHEMICAL PROPERTIES****Form****Color**

grey

**Appearance**

Sandy

**Odor**

No data available

**pH**

No data available

**Melting point/freezing point**

419 °C

**Boiling point, initial boiling point and boiling range**

930 °C

**Flash point**

No data available

**Evaporation rate:**

No data available

**Flammability (solid, gas):**

No data available

**Upper/lower flammability or explosive limits****Upper :**

No data available

**Lower :**

No data available

**Vapour pressure**

No data available

**Vapour density**

No data available

<b>Specific Gravity / Relative density</b>	No data available
<b>Solubilities</b>	water : insoluble . hydrochloric acid , sulfuric acid and sodium hydroxide (aq.) : Reacts to generate hydrogen gas.
<b>n-Octanol/water partition coefficient:(log Pow)</b>	No data available
<b>Auto-ignition temperature:</b>	No data available
<b>Decomposition temperature:</b>	No data available
<b>Viscosity (coefficient of viscosity)</b>	No data available
<b>Dynamic viscosity</b>	No data available

## Section 10: STABILITY AND REACTIVITY

### Stability

<b>Stability</b>	Stable under recommended storage conditions.
<b>Reactivity</b>	No data available

### Hazardous reactions

Reacts with acids to generate hydrogen gas.

### Conditions to avoid

Extremes of temperature and direct sunlight

### Incompatible materials

Acids, Strong oxidizing agents

### Hazardous decomposition products

Metal oxides

## Section 11: TOXICOLOGICAL INFORMATION

### Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Zinc	630 mg/kg ( Rat )	N/A	N/A

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas-source information
Zinc	LD50(oral,rat): >2000mg/kg(OECDガイドライン401, NITEInitial Risk Assessment Report(2007))	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Chemical Name	Acute toxicity -inhalation vapor- source information	Acute toxicity -inhalation dust-source information	Acute toxicity -inhalation mist-source information
Zinc	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

### Skin irritation/corrosion

Chemical Name	Skin corrosion irritation source information
Zinc	Based on the NITE GHS classification results.

### Serious eye damage/ irritation

Chemical Name	Serious eye damage source information
Zinc	Based on the NITE GHS classification results.

### Respiratory or skin sensitization

Chemical Name	Respiratory, Skin sensitization source information
Zinc	Based on the NITE GHS classification results.

### Reproductive cell mutagenicity

Chemical Name	Mutagenic source information
Zinc	Based on the NITE GHS classification results.

### Carcinogenicity

Chemical Name	Carcinogenicity source information
Zinc	Based on the NITE GHS classification results.

### Reproductive toxicity

Chemical Name	Reproductive toxicity source information
Zinc	Based on the NITE GHS classification results.

**STOT-single exposure**

Chemical Name	STOT -single exposure- source information
Zinc	Based on the NITE GHS classification results.

**STOT-repeated exposure**

Chemical Name	STOT -repeated exposure- source information
Zinc	Based on the NITE GHS classification results.

**Aspiration hazard**

Chemical Name	Aspiration Hazard source information
Zinc	Based on the NITE GHS classification results.

## Section 12: ECOLOGICAL INFORMATION

**Ecotoxicity**

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Zinc	<i>ErC50 : Pseudokirchneriella subcapitata 0.15 mg/L 72h</i>	<i>LC50 : Oncorhynchus mykiss 0.24 mg/L 96 h</i>	<i>EC50:Daphnia magna 0.139 - 0.908 mg/L 48 h</i>

**Other data**

Chemical Name	Aquatic toxicity -Acute- source information	Aquatic toxicity -Chronic- source information
Zinc	Based on the NITE GHS classification results.	Based on the NITE GHS Classification results.

<b>Persistence and degradability</b>	No information available
<b>Bioaccumulative potential</b>	No information available
<b>Mobility in soil</b>	No information available
<b>Hazard to the ozone layer</b>	No information available

## Section 13: DISPOSAL CONSIDERATIONS

**Waste from residues**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated container and contaminated packaging**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

## Section 14: TRANSPORT INFORMATION

**ADR/RID**

<b>UN number</b>	UN3077
<b>Proper shipping name:</b>	Environmentally hazardous substance, solid, n.o.s. (Zinc)
<b>UN classification</b>	9
<b>Subsidiary hazard class</b>	
<b>Packing group</b>	III
<b>Marine pollutant</b>	Yes

**IMDG**

<b>UN number</b>	UN3077
<b>Proper shipping name:</b>	Environmentally hazardous substance, solid, n.o.s. (Zinc)
<b>UN classification</b>	9
<b>Subsidiary hazard class</b>	
<b>Packing group</b>	III
<b>Marine pollutant (Sea)</b>	Yes
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	No information available

**IATA**

<b>UN number</b>	UN3077
<b>Proper shipping name:</b>	Environmentally hazardous substance, solid, n.o.s. (Zinc)
<b>UN classification</b>	9

Subsidiary hazard class	
Packing group	III
Environmentally Hazardous Substance	Yes

## Section 15: REGULATORY INFORMATION

### International Inventories

EINECS/ELINCS	Listed
TSCA	Listed

### Japanese regulations

Fire Service Act	Not applicable
Poisonous and Deleterious Substances Control Law	Not applicable
Industrial Safety and Health Act	Not applicable
Regulations for the carriage and storage of dangerous goods in ship	Noxious Substances (Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)
Civil Aeronautics Law	Misellaneous Dangerous Substances and Articles (Ordinance Art.194, MITL Nortification for Air Transportation of Explosives etc., Attached Table 1)
Pollutant Release and Transfer Register Law	Not applicable
Water Pollution Control Act	Specified substances(Law Art.2 Para.4, Enforcement Order Art.3-3)
Export Trade Control Order	Not applicable
Air Pollution Control Law	Hazardous Air Pollutants

## Section 16: OTHER INFORMATION

### **Key literature references and sources for data etc.**

NITE: National Institute of Technology and Evaluation (JAPAN)  
<http://www.safe.nite.go.jp/japan/db.html>  
 IATA dangerous Goods Regulations  
 RTECS:Registry of Toxic Effects of Chemical Substances  
 Japan Industrial Safety and Health Association GHS Model SDS  
 Dictionary of Synthetic Oraganic Chemistry , SSOCJ, Koudansha Scientific Co.Ltd.  
 Chemical Dictionary, Kyouritsu Publishing Co., Ltd.  
 etc

### **Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.  
 GHS Classification is according to JIS Z7252(2014). \*JIS: Japanese Industrial Standards

**End of Safety Data Sheet**