

SAFETY DATA SHEET

According to JIS Z 7253:2019
Revision date 19-Jul-2023
 Revision Number 3.02

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	Zinc Standard Stock Solution (Zn 1000)
Product Code	260-02001

Supplier FUJIFILM Wako Pure Chemical Corporation
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Recommended uses For research use only

Restrictions on use Seek expert judgment when using for purposes other than those recommended.

Section 2: HAZARDS IDENTIFICATION

GHS classification

Classification of the substance or mixture

Acute aquatic toxicity Category 3

Pictograms

Signal word None

Hazard statements

H402 - Harmful to aquatic life

Precautionary statements-(Prevention)

- Avoid release to the environment

Precautionary statements-(Response)

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 Mixture

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS RN
Water	99.7	18.02	N/A	N/A	7732-18-5
Zinc chloride	0.20	136.29	1-264	*	7646-85-7
Hydrochloric Acid	0.10	36.46	(1)-215	*	7647-01-0

Note on ISHL No.: * in the table means announced chemical substances.

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**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

Unsuitable extinguishing media

No information available

Specific hazards arising from the chemical product

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

Special extinguishing method

No information available

Special protective actions for 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 containment and methods and materials for cleaning up

Absorb dry sand, earth, sawdust and the waste. Collect empty container that can be sealed.

Recovery, 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 alkaline 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 (under 25 °C). Keep container tightly closed.
Safe packaging material	Polyethylene
Incompatible substances	Alkali, Metals

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 chloride 7646-85-7	N/A	N/A	STEL: 2 mg/m ³ fume TWA: 1 mg/m ³ fume
Hydrochloric Acid 7647-01-0	5ppm(7.5mg/m ³)	N/A	Ceiling: 2 ppm

Personal protective equipment

Respiratory protection	Protective mask
Hand protection	chemical protective gloves (JIS T 8116)
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	colorless
Turbidity	clear
Appearance	liquid
Odor	no data available
Melting point/freezing point	no data available
Boiling point, initial boiling point and boiling range	no data available
Flammability	no data available
Evaporation rate:	no data available
Flammability (solid, gas):	no data available
Upper/lower flammability or explosive limits	no data available
Upper:	no data available
Lower:	no data available
Flash point	no data available
Auto-ignition temperature:	no data available
Decomposition temperature:	no data available
pH	no data available
Viscosity (coefficient of viscosity)	no data available
Dynamic viscosity	no data available
Solubilities	No data available
n-Octanol/water partition coefficient:(log Pow)	no data available
Vapour pressure	no data available
Specific Gravity / Relative density	no data available
Vapour density	no data available
Particle characteristics	no data available

Section 10: STABILITY AND REACTIVITY

Stability

Reactivity	no data available
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Chemical stability	Stable under recommended storage conditions.
Hazardous reactions	None under normal processing
Conditions to avoid	Extremes of temperature and direct sunlight
Incompatible materials	Alkali, Metals
Hazardous decomposition products	Halides, Metal oxides

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Zinc chloride	1100 mg/kg (Rat)	173 mg/kg (Guinea pig)	=<1975 mg/m ³ (Rat) 10 min
Hydrochloric Acid	238 - 277 mg/kg (Rat)	>5010 mg/kg (Rabbit)	1411 ppm (Rat) 4 h

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas-source information
Zinc chloride	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Hydrochloric Acid	Based on the NITE GHS classification results.	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 chloride	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Hydrochloric Acid	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 chloride	Based on the NITE GHS classification results.
Hydrochloric Acid	Based on the NITE GHS classification results.

Serious eye damage/ irritation

Chemical Name	Serious eye damage/irritation source information
Zinc chloride	Based on the NITE GHS classification results.
Hydrochloric Acid	Based on the NITE GHS classification results.

Respiratory or skin sensitization

Chemical Name	Respiratory or Skin sensitization source information
Zinc chloride	Based on the NITE GHS classification results.
Hydrochloric Acid	Based on the NITE GHS classification results.

Reproductive cell mutagenicity

Chemical Name	germ cell mutagenicity source information
Zinc chloride	Based on the NITE GHS classification results.
Hydrochloric Acid	Based on the NITE GHS classification results.

Carcinogenicity

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

Chemical Name	NTP	IARC	ACGIH	JSOH (Japan)
Hydrochloric Acid 7647-01-0	N/A	Group 1 Group 3	N/A	N/A

Reproductive toxicity

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

Section 12: ECOLOGICAL INFORMATION**Ecotoxicity**

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Zinc chloride	EC50 : <i>Nitzschia</i> 0.065 mg Zn/L 72 h	N/A	EC50 : <i>Daphnia magna</i> 0.1 mg/L 48 h
Hydrochloric Acid	N/A	N/A	EC50 : <i>Daphnia magna</i> 0.492 mg/L 48 h

Other data

Chemical Name	Short-term (acute) hazardous to the aquatic environment source information	Long-term (chronic) hazardous to the aquatic environment source information
Zinc chloride	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Hydrochloric Acid	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Persistence and degradability

No information available

Bioaccumulative potential

No information available

Mobility in soil

No information available

Hazard to the ozone layer

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** Not regulated**UN number** -**Proper shipping name:****UN classification****Subsidiary hazard class****Packing group****Marine pollutant** Not applicable**IMDG** Not regulated**UN number** -**Proper shipping name:****UN classification****Subsidiary hazard class****Packing group****Marine pollutant (Sea)** Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IATA Not regulated
 UN number -
 Proper shipping name:
 UN classification
 Subsidiary hazard class
 Packing group
Environmentally Hazardous Substance Not applicable

Section 15: REGULATORY INFORMATION

Japanese regulations

Fire Service Act	Not applicable
Poisonous and Deleterious Substances Control Law	Not applicable
Industrial Safety and Health Act	Notifiable Substances (Law Art.57-2, Enforcement Order Art.18-2 Attached Table No.9)No.94,98
Regulations for the carriage and storage of dangerous goods in ship	Not applicable
Civil Aeronautics Law	Not applicable
Pollutant Release and Transfer Register Law (2023.4.1-)	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, Designated Chemical Substances

Chemical Name	Poisonous and Deleterious Substances Control Law	Industrial Safety and Health Act Substances (Law Art.57-2)	Pollutant Release and Transfer Register Law (2023.4.1-)
Zinc chloride 7646-85-7 (0.20)	-	Applicable	-
Hydrochloric Acid 7647-01-0 (0.10)	-	Applicable	-

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 Organic Chemistry , SSOCJ, Koudansha Scientific Co.Ltd. Chemical Dictionary, Kyouritsu Publishing Co., Ltd. etc
Record of SDS revisions	The following contents were revised. Product and company identification. Exposure controls/personal protection. Stability and reactivity. Toxicological information. Ecological information. Regulatory information.

Disclaimer

This SDS is according to JIS Z 7253: 2019. 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 Z 7252:2019. *JIS: Japanese Industrial Standards

End of Safety Data Sheet