

SAFETY DATA SHEET

According to JIS Z 7253:2019
Revision date 31-Jan-2023
 Revision Number 6.05

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	2,2'-Azobis[2-(2-imidazolin-2-yl)propane] Dihydrochloride
Product Code	017-19362,011-19365

Manufacturer	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
Supplier	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
Emergency telephone number	+81-6-6203-3741 / +81-3-3270-8571
Recommended uses and restrictions on use	For research use only

Section 2: HAZARDS IDENTIFICATION

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

Serious eye damage/eye irritation
 Chronic aquatic toxicity

Category 2A
 Category 2

Pictograms**Signal word**

Warning

Hazard statements

H319 - Causes serious eye irritation
 H411 - Toxic to aquatic life with long lasting effects

Precautionary statements-(Prevention)

- Wash face, hands and any exposed skin thoroughly after handling
- Wear protective gloves/protective clothing/eye protection/face protection
- 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 C₁₂H₂₂N₆·2HCl

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS RN
2,2'-Azobis[2-(2-imidazol in-2-yl)propane]dihydroc hloride	97.0	323.27	5-5870,1-215	8-(2)-1271	27776-21-2

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

Water spray (fog), Carbon dioxide (CO₂), Foam, Extinguishing powder, Sand

Unsuitable extinguishing media

Do not use straight streams

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 contaminant and methods and materials for cleaning up

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

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 strong oxidizing agents. Use with local exhaust ventilation.

Precautions

Avoid being incompatible with strong acids, especially strong oxidizing agent (nitric acid, etc.). When handling, to pay particular attention to static electricity ignition source, such as shock spark. Avoid long-term and repeated exposure. Pay attention not to give shock.

Safety handling precautions

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

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

Keep container protect from light, store in well-ventilated place at room temperature (preferably cool). Keep container tightly closed.

Safe packaging material

Polyethylene, Polypropylene

Incompatible substances

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

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

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**

White - pale yellow

Appearance

granules

Odor

light, characteristic odor

Melting point/freezing point

188-193 °C (dec.)

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**Upper:**

no data available

Lower:

no data available

Flash point

no data available

Auto-ignition temperature:

no data available

Decomposition temperature:

(SADT:140°C)

pH	5.5 - 6.5 (50g/L, 25°C)
Viscosity (coefficient of viscosity)	no data available
Dynamic viscosity	no data available
Solubilities	water : soluble .
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
Chemical stability	Hygroscopic. May be altered by light.

Hazardous reactions

Decompose at an accelerating pace and discharge nitrogen gas. May cause runaway reaction by heat or sunlight because of self-reactivity. Decompose gradually if stored it higher than 30°C.

Conditions to avoid

Extremes of temperature and direct sunlight, Moisture

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Carbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NO_x), nitrogen gas, Hydrogen chloride (HCl) gas

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
2,2'-Azobis[2-(2-imidazolin-2-yl)propane]dihydrochloride	3.2 g/kg (Rat, male), 2.8 g/kg (Rat, Female)	N/A	N/A

Skin irritation/corrosion

Chemical Name	Skin corrosion/irritation source information
2,2'-Azobis[2-(2-imidazolin-2-yl)propane]dihydrochloride	Skin irritation; rabbit; Mild.

Serious eye damage/ irritation

Chemical Name	Serious eye damage/irritation source information
2,2'-Azobis[2-(2-imidazolin-2-yl)propane]dihydrochloride	Causes serious eye irritation

Respiratory or skin sensitization

Chemical Name	Respiratory or Skin sensitization source information
2,2'-Azobis[2-(2-imidazolin-2-yl)propane]dihydrochloride	Skin sensitization : Negative

Reproductive cell mutagenicity

Chemical Name	germ cell mutagenicity source information
2,2'-Azobis[2-(2-imidazolin-2-yl)propane]dihydrochloride	Reverse mutation assay in S.typhimurium and E.coli; Weak positive(specific activity value: 0.15X10 ³ mutant colony number/mg)

Carcinogenicity no data available

Reproductive toxicity no data available

STOT-single exposure no data available

STOT-repeated exposure no data available

Aspiration hazard no data available

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
2,2'-Azobis[2-(2-imidazolin-2-yl)propane]dihydrochloride	N/A	LC50: 250 mg/L/48h (<i>Oryzias latipes</i>)	EC50: 32 mg/L/48h (<i>Daphnia Magna</i>)

Other data no data available

Persistence and degradability Partial degradation BOD 3% TOC 4%
Bioaccumulative potential (Carp): Low accumulation 50µg/L: <2.3 times 5µg/L:<2.7 times
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

UN number UN3077
Proper shipping name: Environmentally hazardous substance, solid, n.o.s.
 (2,2'-Azobis[2-(2-imidazolin-2-yl)propane]dihydrochloride)
UN classification 9
Subsidiary hazard class
Packing group III
Marine pollutant Yes

IMDG

UN number UN3077
Proper shipping name: Environmentally hazardous substance, solid, n.o.s.
 (2,2'-Azobis[2-(2-imidazolin-2-yl)propane]dihydrochloride)
UN classification 9
Subsidiary hazard class
Packing group III
Marine pollutant (Sea) Yes
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

IATA

UN number UN3077
Proper shipping name: Environmentally hazardous substance, solid, n.o.s.
 (2,2'-Azobis[2-(2-imidazolin-2-yl)propane]dihydrochloride)
UN classification 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 Not applicable

Substances Control Law	
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 (~2023.3.31)	Not applicable
<u>Pollutant Release and Transfer Register Law (2023/4/1~)</u>	<u>Not applicable</u>
Export Trade Control Order	Not 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 Oraganic Chemistry , SSOCJ, Koudansha Scientific Co.Ltd.
 Chemical Dictionary, Kyouritsu Publishing Co., Ltd.
 etc

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 Z7252(2019). *JIS: Japanese Industrial Standards

End of Safety Data Sheet