

## SAFETY DATA SHEET

According to JIS Z 7253:2019  
**Revision date** 26-Feb-2024  
 Revision Number 3.07

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

<b>Product Name</b>	1,2-Dibromoethane
<b>Product Code</b>	043-21832,047-21835,045-21831

**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** 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 toxicity - Oral	Category 3
Acute toxicity - Dermal	Category 3
Acute toxicity - Inhalation (Vapors)	Category 2
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Germ cell mutagenicity	Category 2
Carcinogenicity	Category 1B
Reproductive Toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 1, Category 3
<b>Category 1</b> liver, kidneys, central nervous system	
<b>Category 3</b> Respiratory irritation	
Specific target organ toxicity (repeated exposure)	Category 2
<b>Category 2</b> liver, kidneys, respiratory system	
Acute aquatic toxicity	Category 2
Chronic aquatic toxicity	Category 2

## Pictograms



Signal word

Danger

## Hazard statements

H315 - Causes skin irritation  
 H319 - Causes serious eye irritation  
 H301 - Toxic if swallowed  
 H311 - Toxic in contact with skin  
 H330 - Fatal if inhaled  
 H341 - Suspected of causing genetic defects  
 H350 - May cause cancer  
 H361 - Suspected of damaging fertility or the unborn child

H335 - May cause respiratory irritation  
 H411 - Toxic to aquatic life with long lasting effects  
 H401 - Toxic to aquatic life  
 H370 - Causes damage to the following organs: liver, kidneys, central nervous system  
 H373 - May cause damage to the following organs through prolonged or repeated exposure: liver, kidneys, respiratory system

**Precautionary statements-(Prevention)**

- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood
- Use personal protective equipment as required
- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Do not breathe dust/fume/gas/mist/vapors/spray
- Use only outdoors or in a well-ventilated area
- Avoid release to the environment

**Precautionary statements-(Response)**

- IF exposed: Call a POISON CENTER or doctor/physician
- 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 ON SKIN: Wash with plenty of soap and water
- Call a POISON CENTER or doctor/physician if you feel unwell
- Remove/Take off immediately all contaminated clothing
- Wash contaminated clothing before reuse
- If skin irritation occurs: Get medical advice/attention
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- Call a POISON CENTER or doctor/physician if you feel unwell
- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
- Rinse mouth
- Collect spillage

**Precautionary statements-(Storage)**

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

**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** CH<sub>2</sub>BrCH<sub>2</sub>Br

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS RN
1,2-Dibromoethane	98.0	187.86	(2)-59	2-(13)-38	106-93-4

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

### 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**

Foam, Extinguishing powder, Carbon dioxide (CO<sub>2</sub>), Sand

**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. Vapors may form explosive mixtures with air

**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**

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**

Flammable. Avoid contact with high temperature objects, spark, and strong oxidizing agents. 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**

Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity) 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

Safe packaging material closed. Store locked up.  
 Incompatible substances Glass  
 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
1,2-Dibromoethane 106-93-4	N/A	N/A	Skin

### Personal protective equipment

**Respiratory protection** gas mask for organic gas ( JIS T 8152 )  
**Hand protection** chemical protective gloves ( JIS T 8116 )  
**Eye protection** protective eyeglasses or chemical safety goggles (JIS T 8147)  
**Skin and body protection** Long-sleeved work clothes

### General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

If this product is classified as "Chemical Substances Hazardous to Skin, etc.", use appropriate protective equipment to them.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

### Form

**Color** Colorless - yellow brown  
**Turbidity** clear  
**Appearance** liquid

### Odor

characteristic odor

### Melting point/freezing point

9-11 °C

### Boiling point, initial boiling point and boiling range

130 °C

### 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

1 °C

### Auto-ignition temperature:

490 °C

### Decomposition temperature:

no data available

### pH

no data available

### Viscosity (coefficient of viscosity)

no data available

### Dynamic viscosity

no data available

### Solubilities

Ethanol , acetone : Very soluble. water : practically insoluble, or insoluble .

### n-Octanol/water partition coefficient:(log Pow)

1.93

### Vapour pressure

no data available

### Specific Gravity / Relative density

2.2g/mL

### Vapour density

no data available

### Particle characteristics

no data available

## Section 10: STABILITY AND REACTIVITY

### Stability

**Reactivity** no data available  
**Chemical stability** May be altered by light.

**Hazardous reactions**  
 None under normal processing

**Conditions to avoid**  
 Extremes of temperature and direct sunlight, Heat, flames and sparks, static electricity, spark

**Incompatible materials**  
 Strong oxidizing agents

**Hazardous decomposition products**  
 Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Halides

## Section 11: TOXICOLOGICAL INFORMATION

### Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
1,2-Dibromoethane	117 mg/kg ( Rat )	450 mg/kg ( Rabbit )	2.31 mg/L(Rat) 4 h

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas- source information
1,2-Dibromoethane	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
1,2-Dibromoethane	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
1,2-Dibromoethane	Based on the NITE GHS classification results.

### Serious eye damage/ irritation

Chemical Name	Serious eye damage/irritation source information
1,2-Dibromoethane	Based on the NITE GHS classification results.

### Respiratory or skin sensitization

Chemical Name	Respiratory or Skin sensitization source information
1,2-Dibromoethane	Based on the NITE GHS classification results.

### Reproductive cell mutagenicity

Chemical Name	germ cell mutagenicity source information
1,2-Dibromoethane	Based on the NITE GHS classification results.

### Carcinogenicity

Chemical Name	Carcinogenicity source information
1,2-Dibromoethane	Based on the NITE GHS classification results.

Chemical Name	NTP	IARC	ACGIH	JSOH (Japan)
1,2-Dibromoethane 106-93-4	Reasonably Anticipated	Group 2A	A3	Group 2A

### Reproductive toxicity

Chemical Name	Reproductive toxicity source information
1,2-Dibromoethane	Based on the NITE GHS classification results.

### STOT-single exposure

Chemical Name	STOT -single exposure- source information
1,2-Dibromoethane	Based on the NITE GHS classification results.

### STOT-repeated exposure

Chemical Name	STOT -repeated exposure- source information
1,2-Dibromoethane	Based on the NITE GHS classification results.

### Aspiration hazard

Chemical Name	Aspiration Hazard source information
1,2-Dibromoethane	Based on the NITE GHS classification results.

## Section 12: ECOLOGICAL INFORMATION

### Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
1,2-Dibromoethane	N/A	N/A	LC50 : <i>Ceriodaphnia dubia</i> 3.61 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
1,2-Dibromoethane	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

UN number	UN1605
Proper shipping name:	Ethylene dibromide
UN classification	6.1
Subsidiary hazard class	
Packing group	I
Marine pollutant	Yes

### IMDG

UN number	UN1605
Proper shipping name:	Ethylene dibromide
UN classification	6.1
Subsidiary hazard class	
Packing group	I
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	Forbidden
UN number	UN1605
Proper shipping name:	Ethylene dibromide
UN classification	6.1
Subsidiary hazard class	
Packing group	
Environmentally Hazardous Substance	Yes

## Section 15: REGULATORY INFORMATION

### Japanese regulations

<b>Fire Service Act</b>	Not applicable
<b>Poisonous and Deleterious Substances Control Law</b>	Deleterious Substances 1st. Grade
<b>Industrial Safety and Health Act</b>	Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57) Notifiable Substances (Law Art.57-2) Mutagens - Existing Chemicals Substances designated by the Minister of Health, Labor and Welfare as carcinogenic(Ordinance on Industrial Safety and Health Art.577, Para.2) 【2024.4.1~】Chemical Substances Hazardous to Skin, etc.(Regulations Article 594-2 Paragraph 1)
<b>Industrial Safety and Health Act (2024~)</b>	
<b>Regulations for the carriage and storage of dangerous goods in ship</b>	Toxic Substances - Poison (Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)
<b>Civil Aeronautics Law</b>	Forbidden (Ordinance Art.194)
<b>Marine Pollution Prevention Law</b>	Enforcement ordinance Appendix No. 1 Noxious liquid substance Category Y Marine pollutants (P and PP substances)
<b>Pollutant Release and Transfer Register Law (2023.4.1-)</b>	Class 1
<b>Class 1 - No.</b>	507
<b>Export Trade Control Order</b>	Appendix 2 Export Approval Item
<b>Air Pollution Control Law</b>	Hazardous Air Pollutants

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-)
1,2-Dibromoethane 106-93-4 ( 98.0 )	Applicable	Applicable	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 Disclaimer

The following contents were revised. Regulatory information.

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**