

SAFETY DATA SHEET

1. Chemical Product and Company Identification

ProductName Br2 (Code #:BRH01LB)

Reference NO. BRE01LAG-001

Creation Date 2025/11/20

Company Name : Kojundo Chemical Laboratory Co.,Ltd.
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Product Use For research purposes

Restriction of use Seek expert judgment when using the product for applications other than those recommended

2. Hazards identification

[GHS CLASSIFICATION]

PHYSICAL HAZARDS

Corrosive to metals : Category1

HEALTH HAZARDS

Acute toxicity(inhalation:vapours) : Category2

Skin corrosion/irritation : Category1

Serious eye damage/Eye Irritation : Category1

Specific target organ toxicity(single exposure) : Category1 (Respiratory tract,Central nervous system)

Specific target organ toxicity(repeated exposure) : Category1 (Respiratory tract,Nervous system,Endocrine system)

ENVIRONMENTAL HAZARDS

Hazard to the aquatic environment (acute) : Category1

Hazard to the aquatic environment (chronic) : Category1

[GHS LABEL ELEMENTS]

Pictogram :



Signal Word : Danger

Hazard Statement : May be corrosive to metals(H290)
 : Causes severe skin burns and eye damage(H314)
 : Fatal if inhaled(H330)
 : Causes damage to organs (Respiratory tract,Central nervous system)(H370)
 : Causes damage to organs (Respiratory tract,Nervous system,Endocrine system)(H372)
 : Very toxic to aquatic life with long lasting effects(H410)

Precautionary Statement

Safety measures : Keep only in original packaging.(P234)

- : Do not breathe dust/fume/gas/mist/vapours/spray.(P260)
- : Wash the competent authority to specify parts of the body to be washed after handling. thoroughly after handling.(P264)
- : Do not eat, drink or smoke when using this product.(P270)
- : Use only outdoors or in a well-ventilated area.(P271)
- : Avoid release to the environment.(P273)
- : Wear protective gloves/protective clothing/eye protection/face protection.(P280)
- : In case of inadequate ventilation wear respiratory protection. (P284)

First aid measures : Immediately call a POISON CENTER/doctor(P310)

- : Get medical advice/attention if you feel unwell.(P314)
- : Specific treatment is urgent .(P320)
- : Specific treatment.(P321)
- : Wash contaminated clothing before reuse.(P363)
- : Absorb spillage to prevent material damage.(P390)
- : Collect spillage.(P391)
- : IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. (P301+P330+P331)
- : IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.(P303+P361+P353)
- : IF INHALED: Remove person to fresh air and keep comfortable for breathing.(P304+P340)
- : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.(P305+P351+P338)
- : IF exposed or concerned: Call a POISON CENTER/doctor(P308+P311)

Storage : Store locked up.(P405)

- : Store in a corrosion resistant container with a resistant inner liner.(P406)
- : Store in a well-ventilated place. Keep container tightly closed. (P403+P233)

Disposal : Dispose of contents/container in accordance with local/regional/national/international regulation.(P501)

3. Composition/information on ingredients

Classification of the substance or mixture : Substance
Chemical or generic name : Bromine

Chemical name	Concentration(%)	CAS RN®
Dibromine	100.00	7726-95-6

4. First aid measures

Inhalation : Remove the exposed person immediately and provide fresh air. Get medical attention.

Skin contact : Promptly flush contaminated skin with soap or mild detergent and water.
Contact Dermatologist if irritation continues.

Eye contact	: Rinse cautiously with water for 15 minutes. Get medical attention from an ophthalmologist. When washing your eyes, hold your eyelids open with your fingers to allow water to reach every corner of your eyeballs and eyelids.
Ingestion	: Rinse mouth and throat with water. Get medical attention immediately.
Necessary precautions for protection of person performing first aid measures	: Rescue workers wear appropriate eye and skin protection equipment according to the situation.
Special precautions for doctors	: The doctor should carry out treatment that corresponds to the patient's symptoms.

5. Fire fighting measures

Suitable extinguishing media	: No information available
Unsuitable extinguishing media ※	: No information available
Special hazards arising from the substance or mixture	: Danger to generate irritating, corrosive and toxic gases during fire. : Fire extinguishing water may cause pollution.
Special protective equipment and precautions for fire-fighters	: Wear appropriate respiratory air and the protective clothing (heat resistance).

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	: Remove all ignition sources. : Workers should use protective wears to prevent contact with the spilt adhesive and inhalation of its vapor/dusts. Indoor leakage: Ventilate as much as possible until the cleaning is completed. Outdoor leakage: Work from the windward and evacuate the leeward crowd.
Environmental precautions	: Prevent flow out to river, etc. so as not to badly affect.
Methods and material for containment and cleaning up	: Shut off leak if without risk. Avoid unnecessary contacts with spills. : Absorb or cover with vermiculite or other suitable absorbent, and dispose of DOT-approved waste containers as much as possible. Carefully wash spill site with plenty of water after material pick up.
Measures to prevent secondary disasters	: Prevent leakage into sewer, rivers and etc., and take measures to prevent environmental pollution.

7. Handling and storage

Handling	
Technical measures	: No information available
Precautions for safe handling	: No information available
Avoid contact	: Use protective wears and local ventilation equipment, if inhalation or skin contact is foreseen. Avoid prolonged or repeated exposure.
Hygiene measures	: Do not eat, drink or smoke when using this product. : Wash hands thoroughly after handling.

Storage

- Safe storage conditions : Store the material in a sealed container.
Store in a cool, dry, well ventilated and dark place away from incompatible materials.
- : Store in a locked designated storage area.
- : Do not use metal containers. Do not bring metal objects or metal products close.
- Safe container packaging materials : No information available

8. Exposure controls / Personal protection**Control parameters**

Chemical name	ACGIH	OSHA
Dibromine	TWA:0.1ppm STEL:0.2ppm	TWA:0.1ppm TWA:0.7mg/m3

- Equipment : Install the appropriate general ventilation equipment, local exhaust ventilation in the workplace.
- Personal protection
- Respiratory protection : Wear appropriate NIOSH/MSHA-approved respirator.
- Hand protection : Wear appropriate NIOSH/MSHA-approved impervious gloves.
- Eye and face protection : Wear appropriate NIOSH/MSHA-approved safety goggles.
- Skin and body protection : Wear appropriate NIOSH/MSHA-approved impervious protective wear, protective boots.
- Special precautions : Regularly check your protective gear.
- : The notes for the table are as follows.
D: Dust, M: Mist, F: Fumes, I: Inhalable particles, R: Respirable particles, IFV: Inhalable particles and vapors, T: Total dust, V: Vapors, C: Ceiling limit

9. Physical and chemical properties

- Physical state : Liquid
- Color : Reddish-brown
- Odour : Peculiar strong odor
- Melting point/Freezing point : -7.2°C
- Boiling point, initial boiling point and boiling range : 58.78°C
- Flammability : Non-combustible
- Range of explosion (lower bound - upper bound) : No information available
- Flash point : No information available
- Autoignition temperature : No information available
- Decomposition temperature : No information available
- pH : No information available
- Kinematic viscosity : No information available
- Solubility : Soluble in alcohol, ether, carbon disulfide, chloroform, benzene, carbon tetrachloride, and aqueous alkali bromide solution
- Partition coefficient (n-octanol/water) : No information available
- Vapor pressure : 23.3KPa
- Density/Specific gravity : 3.1226g/cm3(20°C)
- Relative vapor density : No information available
- Particle characteristics : No information available

Other : F.W. : 159.8
Oxidizing : Strong oxidizing agent

10. Stability and reactivity

Reactivity : No information available
Chemical stability : Stable when stored in sealed container (at room temperature).
Possibility of hazardous reactions : The risk of corroding metal.
Conditions to avoid : Keep away from direct sunlight. Store in a cool, dark place.
Incompatible materials : No information available
Hazardous decomposition products : No information available

11. Toxicological information

Acute toxicity(oral)
No information available
Acute toxicity(dermal)
No information available
Acute toxicity(inhalation:gases)
No information available
Acute toxicity(inhalation:vapours)
Dibromine : Category2
Acute toxicity(inhalation:dusts and mists)
No information available
Skin corrosion/Skin irritation
Dibromine : Category1
Serious eye damage/Eye Irritation
Dibromine : Category1
Respiratory sensitizer
No information available
Skin sensitizer
No information available
Germ cell mutagenicity
No information available
Carcinogenicity
No information available
Toxic to reproduction/Effects on or via lactation
No information available
Specific target organ toxicity(single exposure)
Dibromine : Category1 (Respiratory tract, Central nervous system)
Specific target organ toxicity(repeated exposure)
Dibromine : Category1 (Respiratory tract, Nervous system, Endocrine system)
Aspiration hazard
No information available

12. Ecological information

Hazard to the aquatic environment (acute)
Dibromine : Category1
Hazard to the aquatic environment (chronic)
Dibromine : Category1

Hazardous to the ozone layer
No information available

Ecotoxicity/Fish toxicity
No information available

Ecotoxicity/ Invertebrate toxicity
Crustacea (Daphnia magna) LC50(48h) = 1000 μ g/L(AQUIRE(2003))(Dibromine)

Ecotoxicity/ Algal toxicity
No information available

Persistence and degradability
No information available

Bioaccumulative potential
No information available

Mobility in soil
No information available

13. Disposal considerations

Remained waste	: Discard in accordance with the standards of the local government and relevant legislation.
A polluted container and packing	: When disposing of empty containers, empty containers are processed in accordance with the standards of the local government as well as the related laws and regulations and waste disposal method after contents are completely removed.

14. Transport information

UN number	: 1744
Guideline Number	: 154
Shipping name	: BROMINE or BROMINE SOLUTION
UN Class	: Class8 Corrosive substances
Packing group	: I
Subsidiary risk(s)	: 6.1
MARINE POLLUTANT	: Applicable
Transport in bulk according to MARPOL 73/78,Annex II ,and the IBC code	: Not applicable
Special safety measures for transport or means of transport	: Follow "7. Handling and storage" : Check no leak of container, handle without overturning, falling and damaging,then reliably prevent from cargo shift.
Domestic regulations	
Ground transport	: Follow the transportation method specified in the Fire Service Law and the Industrial Safety and Health Law.
Marine transport	: Follow the transportation method specified in the Ship Safety Law.
Air transport	: Follow the transportation method specified in the Aviation Law.

15. Regulatory information

Follow relevant national and local regulations.

16. Other information

This " Safety Data Sheet(SDS)" is for provision of information, and it does not represent a guarantee the properties or safeties of the product.

Since not all materials and literature have been investigated, information may be omitted, and changes may occur in the content due to the discovery of new findings or corrections of previous theories.

The information contained herein is based on information in our possession, but we do not guarantee the completeness of the information.

It is subject to revision based on changes in laws and regulations and new findings.

When using this information for important decisions, we recommend that you carefully review the source of the information or verify it through testing.

Values of ingredients, content, physicochemical properties, etc., are not quality assurance values.

Prior to use, please investigate the laws and regulations of the organization, area and country where the product is to be used.

The information is intended to ordinary usage, in case of special handling, sufficient care should be taken.

※ We recommend not using fire extinguishing medias that are also listed as "Suitable extinguishing media".