



Safety Data Sheet

Section 1. Identification of the substance/mixture and of the company/undertaking

Product identifier:

Product name: Bromothymol blue solution

SDS No. : G0023E-2

Recommended use of the chemical and restrictions on use

Research and Development

Details of the supplier of the safety data sheet

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

Address: 3-1, Honmachibashi, Chuo-ku, Osaka, JAPAN

Division: Chemical Safety Management Department

Telephone number: +81-6-6946-8061

FAX: +81-6-6946-1607

Section 2. Hazards identification

Classification of the substance or mixture

(Note) GHS classification without description: Not classified/Classification not possible

Label elements

Hazard pictogram: Not applicable

Signal word: Not applicable

Specific danger/hazard

Health hazard

See "11. Toxicological Information".

Section 3. Composition/information on ingredients

Substance/mixture:

Mixture

Ingredient name	Content (%)	CAS RN	ENCS	Chemical formula
Bromothymol blue	0.040	76-59-5	-	C ₂₇ H ₂₈ Br ₂ O ₅ S
Sodium hydroxide	0.0026	1310-73-2	1-410	NaOH
Water	99	7732-18-5	-	H ₂ O

Note : The figures shown above are not the specifications of the product.

Section 4. First aid measures

Descriptions of first aid measures

General measures

Get medical help if you feel unwell.

IF INHALED

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If experiencing respiratory symptoms: Get emergency medical help immediately.

Get medical help if you feel unwell.

**IF ON SKIN**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water or shower.

If experiencing skin: Get emergency medical help immediately.

If you observe unusual symptom, have irritation/pain and/or feel unwell, seek medical advice.

IF IN EYES

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

Rinse in order to better reach all parts of eyes.

Remove all chemicals from contact with the victim's eyes immediately. A delay of only seconds may increase the injury.

If experiencing eye: Get medical help.

IF SWALLOWED

Rinse mouth.

IF SWALLOWED: Get emergency medical help immediately.

Section 5. Fire-fighting measures**Extinguishing media****Suitable extinguishing media**

Use appropriate extinguishing media suitable for surrounding facilities.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

Specific hazards arising from the substance or mixture

Fire may produce irritating, corrosive and/or toxic gases.

Runoff from fire control or dilution water may cause pollution.

See "10.Stability and Reactivity".

Advice for firefighters**Special extinguishing method**

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

Wear fire resistant or flame retardant clothing.

Wear protective gloves/protective clothing/eye protection/face protection.

Firefighters should wear self-contained breathing apparatus with a full facepiece operated in the positive pressure mode.

Section 6. Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Keep unauthorized personnel away.

Ventilate area until material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Prevent spills from entering sewers, watercourses, low areas or rivers. To be careful not discharged to the environment without being properly handled waste water contaminated.

Methods and materials for containment and cleaning up

Liquid: Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

Solid: Sweep up, place in a bag and hold for waste disposal.



Preventive measures for secondary accident

Collect spillage.

Section 7. Handling and storage

Precautions for safe handling

Engineering measures

(Measures to prevent operator exposure)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Measures to prevent fire and explosion)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

(Local ventilation/general ventilation)

Use adequate general or local exhaust ventilation.

(Precautions)

Avoid contact with skin.

Avoid contact with eyes.

Advice on safe handling

Wear protective gloves/protective clothing/eye protection/face protection.

Wash hands and contaminated parts thoroughly after handling.

When using do not eat, drink or smoke.

Avoidance of contact

See Section 10: Stability and Reactivity.

Advice on general occupational hygiene

Wash hands thoroughly after handling. Do not touch eyes.

Conditions for safe storage, including any incompatibilities

Conditions for safe storage

Keep container tightly closed.

Store in a cool, dry place. Do not store in direct sunlight.

Storage in accordance with local/national regulation.

Safe packaging material

Use closed unbreakable containers.

Section 8. Exposure controls/personal protection

Control parameters

Permissible concentration

Administrative Control Levels and Concentration standard value

Not established

Occupational exposure limit values

The Japan Society for Occupational Health

(Sodium hydroxide)

(Ceiling) 2mg/m³

ACGIH

(Sodium hydroxide)

Ceiling: 2mg/m³ (URT, eye & skin irr)

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Washing facilities should be available.

Individual protection measures, such as personal protective equipment



Recommend to use protective equipment in conformity with the standards.

Use appropriate protective equipment in accordance with local/national regulation.

Respiratory protection

Wear respiratory protection (dust-proof mask/gas mask). Select chemical cartridge corresponding to type of gases when using a gas mask.

Hand protection

Wear impervious protective glove.

Consult with your glove and/or personnel equipment manufacturer for selection of appropriate compatible materials as needed.

Inspect before use and replace worn or damaged gloves.

Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions as needed.

Eye/face protection

Wear eye/face protection. Wear safety goggles in cases gas is generated.

Skin and body protection

Wear protective clothing.

Personal protective equipment for the body and skin should be selected based on the task being performed and the risks involved.

Section 9. Physical and Chemical Properties

Physical state: Liquid

Color: Green

Odor data is not available.

Melting point/Freezing point data is not available.

Boiling point, initial boiling point, or boiling range data is not available.

Flammability data is not available.

Lower and upper explosion limit/flammability limit data is not available.

Flash point data is not available.

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

pH: 6.0~7.6

Kinematic viscosity data is not available.

Solubility:

Solubility in water: Soluble

Solubility in solvent data is not available.

Partition coefficient n-octanol/water data is not available.

Vapor pressure data is not available.

Density and/or relative density: 1.0

Relative vapor density (Air=1) data is not available.

Particle characteristics data is not available.

Other information

Other information is not available.

Section 10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Stable under normal storage/handling conditions.

**Possibility of hazardous reactions**

(Sodium hydroxide)

The solution in water is a strong base. It reacts violently with acid and is corrosive to metals such as aluminium, tin, lead and zinc. This produces a combustible/explosive gas (hydrogen). Reacts with ammonium salts. This produces ammonia. This generates fire hazard.

Contact with moisture and water generates heat. (ICSC 0360)

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Acids, Strong oxidizing agents, Ammonium salts, Metals

Hazardous decomposition products

Carbon oxides, Sulfur oxides, Bromine compounds, Hydrogen

Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity data is not available.

Skin corrosion/irritation

[Data for components of the product]

[NITE-CHRIP]

(Sodium hydroxide)

Category 1 (source: NITE)

[Company proprietary data]

(Bromothymol blue)

Category 2

Serious eye damage/irritation

[Data for components of the product]

[NITE-CHRIP]

(Sodium hydroxide)

Category 1 (source: NITE)

[Company proprietary data]

(Bromothymol blue)

Category 2A

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

Carcinogenic effects data is not available.

Reproductive toxicity data is not available.

Specific target organ toxicity – single exposure data is not available.

Specific target organ toxicity – repeated exposure data is not available.

Aspiration hazard data is not available.

Section 12. Ecological Information

Toxicity

Aquatic toxicity

[Data for components of the product]

Hazardous to the aquatic environment, short-term (acute)

[NITE-CHRIP]

(Sodium hydroxide)



Crustacea (Ceriodaphnia quadrangular) 48-hour LC50: 40 mg/L (source: NITE)

Water solubility
(Sodium hydroxide)
109 g/100 mL (20°C) (source: ICSC, 2010)

Persistence and degradability
Persistence and degradability data is not available.

Bioaccumulative potential
Bioaccumulative potential data is not available.

Mobility in soil
Mobility in soil data is not available.

Other adverse effects
Ozone depleting chemical data is not available.

Section 13. Disposal considerations

Waste treatment methods

Waste from residues, Contaminated packing
Avoid release to the environment.
Dispose of contents/container as industrial waste. Accordance with local/national regulation.

Section 14. Transport Information

UNRTDG
UN number : Not regulated

IMDG Code (International Maritime Dangerous Goods Regulations)
UN number : Not regulated

IATA (Dangerous Goods Regulations)
UN number : Not regulated

Environmental hazards
Marine pollutants (yes/no) : no
Environmentally hazardous substance/mixture (yes/no) : no

Section 15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Toxic Substances Control Act (TSCA) Inventory
Chemicals listed in TSCA Inventory
Bromothymol blue; Sodium hydroxide; Water

Other regulatory information
Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

Section 16. Other information

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN
Recommendations on the TRANSPORT OF DANGEROUS GOODS 23rd edit., 2023 UN
IMDG Code, 2024 Edition (Incorporating Amendment 42-24)
IATA Dangerous Goods Regulations (67th Edition) 2026



2024 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2026 TLVs and BEIs. (ACGIH)

JIS Z 7252 : 2025

JIS Z 7253 : 2025

Recommendation of occupational exposure limits (2024-2025) (JSOH)

Supplier's data/information

General Disclaimer

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Unauthorized translation or modification is prohibited.

Please provide SDS to customers for selling or transferring.

All chemicals have unknown hazard. Handle the product with care.

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Data published in Japan (National Institute of Technology and Evaluation (NITE) Chemical Risk Information Platform (NITE-CHRIP), up to FY2024).