Safety Data Sheet BROMOTHYMOL BLUE Solution

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SECTION 1: Identification

GHS Product identifier

Product name	BROMOTHYMOL BLUE Solution

Other means of identification

Product	Product Code
BROMOTHYMOL BLUE 0.1% Solution LR Dibromothymolsulphonphthalein solution	BL083

Recommended use of the chemical and restrictions on use

pH indicator: pH 6.0 (Yellow) to pH 7.6 (Blue)

Supplier's details

Name	ChemSupply Australia Pty Ltd
Address	38-50 Bedford Street 5013 Gillman South Australia Australia
Telephone	08 8440 2000
email	www.chemsupply.com.au

Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

SECTION 2: Hazard identification

General hazard statement

Classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

Classified as Hazardous according to the Globally Harmonised System of classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

- Flammable liquids, Cat. 3

GHS label elements, including precautionary statements

Pictograms

Signal word	**Warning**

Hazard statement(s)

H226	Flammable liquid and vapor

Precautionary statement(s)

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting/...] equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P370+P378	In case of fire: Use … to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container to …

SECTION 3: Composition/information on ingredients

Mixtures

Molecular weight: 624.41

Components

Component	CAS no.	Concentration
Ethanol (EC no.: 200-578-6; Index no.: 603-002-00-5)	**64-17-5**	**< 50 % (weight)**
CLASSIFICATIONS: Flammable liquids, Cat. 2. HAZARDS: H225 - Highly flammable liquid and vapor.		
Water (EC no.: 231-791-2)	**7732-18-5**	**< 50 % (weight)**
CLASSIFICATIONS: No data available. HAZARDS: No data available.		
Bromothymol Blue (EC no.: 200-971-2)	**76-59-5**	**< 0.1 % (weight)**
CLASSIFICATIONS: No data available. HAZARDS: No data available.		

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice	Other Information: If there are signs of drunkenness (intoxication or inebriation) then serious health effects may follow (depending on the amount swallowed or inhaled), seek immediate medical attention.
If inhaled	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

In case of skin contact	Rinse with plenty of water. Get medical attention if irritation develops and persists.
In case of eye contact	If contact with the eye(s) occurs, wash with copious amounts of water for approximately 15 minutes holding eyelid(s) open. Take care not to rinse contaminated water into the non-affected eye. If persistent irritation occurs, obtain medical attention.
If swallowed	DO NOT INDUCE VOMITING. Wash out mouth with water and give plenty of water to drink. Seek medical attention.

Most important symptoms/effects, acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of immediate medical attention and special treatment needed, if necessary
For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

SECTION 5: Fire-fighting measures

Suitable extinguishing media
Caution: Use of water spray when fighting fire may be inefficient.
Small fire: Use foam, dry chemical, CO2 or water spray.
Large fire: Use foam, fog or water spray - Do not use water jets.
If safe to do so, move undamaged containers from fire area. Cool containers with flooding quantities of water until well after fire is out.
Avoid getting water inside containers.

Specific hazards arising from the chemical
Hazards from Combustion Products: Carbon monoxide and dioxide.

FLAMMABLE: These products have a low flash point - Will be easily ignited by heat, sparks or flames at ambient temperatures. Vapours will form explosive mixtures with air. Vapours will travel to source of ignition and flash back. Fire may produce irritating, poisonous and/or corrosive gases. Containers may explode when heated. Many liquids are lighter than water. Many vapours are heavier than air and will collect in low or confined areas (drains, basements, tanks). Vapours from run-off may create an explosion hazard.

Special protective actions for fire-fighters
SCBA and structural firefighter's uniform may provide limited protection. Fully-encapsulating, gas-tight suits should be worn for maximum protection.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

Methods and materials for containment and cleaning up
ELIMINATE all ignition sources (no smoking, flares, sparks or flame) within at least 50m - All equipment used in handling the product must be earthed.
Do not touch or walk through spilled material.
Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas.
Vapour-suppressing foam may be used to control vapours.
Absorb spill with earth, sand or other non-combustible material - Use clean, non-sparking tools to collect material and place it in loosely-covered metal or plastic containers for later disposal. Water spray may be used to knock down or divert vapour clouds.

SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.

SECTION 7: Handling and storage

Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities
Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Separate from incompatibles. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

SECTION 8: Exposure controls/personal protection

Control parameters

CAS: 64-17-5
Ethanol
AU/SWA (Australia): 1000 ppm; 1880 mg/m3 TWA inhalation

Appropriate engineering controls
Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection
Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Body protection
Footwear: Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.

Body Protection: Clean clothing or protective clothing should be worn, preferably with and apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Respiratory protection
If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/ mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. Reference should be made to Australian Standards AS/ NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	Clear blue solution.
Color	No data available.
Odor	No data available.
Odor threshold	No data available.
Melting point/freezing point	No data available.
Boiling point or initial boiling point and boiling range	98 °C
Flammability	Flammable
Lower and upper explosion limit/flammability limit	No data available.
Flash point	36 °C
Explosive properties	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Oxidizing properties	No data available.
pH	No data available.
Kinematic viscosity	No data available.
Solubility	Solubility in Water: Soluble in water.
Partition coefficient n-octanol/water (log value)	No data available.
Vapor pressure	No data available.
Evaporation rate	No data available.
Density and/or relative density	No data available.
Relative vapor density	No data available.
Particle characteristics	No data available.

Supplemental information regarding physical hazard classes
No data available.

Further safety characteristics (supplemental)
No data available.

SECTION 10: Stability and reactivity

Reactivity
Stable under normal conditions of storage and handling.

Risk of ignition. Vapours may form explosive mixtures with air

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
Hazardous Polymerization: Will not occur.

Conditions to avoid
Avoid storing in direct sunlight and avoid extremes of temperature.

Heat, flames and sparks.

Incompatible materials
Strong oxidising agents.

Hazardous decomposition products

Other decomposition products - No data available In the event of fire: see section 5

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Acute Toxicity - Oral: Ethyl alcohol: LD50 (oral, rat) : 7060 mg/kg.
Acute Toxicity - Inhalation: Ethyl alcohol: LC50 (inhalation, rat) : 38 mg/10H.

Ingestion: Cause headaches, gastritis, intoxication, blindness and, in acute cases, death.

Inhalation: Exposure may cause irritation to the mucous membranes of the upper respiratory tract. Prolonged exposures to high concentrations may cause drowsiness, loss of appetite and inability to concentrate.

Skin corrosion/irritation
Causes skin irritation, cracking or flaking due to dehydration and defatting action. May be absorbed through the skin with possible systemic effects.

Serious eye damage/irritation
Can cause eye irritation. Splashes may cause temporary pain and blurred vision.

Respiratory or skin sensitization
Not classified based on available information.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
IARC has evaluated ethanol as a carcinogen on the basis of effects of drinking alcoholic beverages, but there is no known carcinogenic risk from occupational exposures.

Reproductive toxicity
Not classified based on available information.

Specific target organ toxicity (STOT) - single exposure
Not classified based on available information.

Specific target organ toxicity (STOT) - repeated exposure
Not classified based on available information.

Aspiration hazard
Not classified based on available information.

Additional information
Chronic Effects: Prolonged skin contact causes drying and cracking of skin. May affect the nervous system. May affect liver, blood, reproductive system. Continued ingestion of small amounts could result in blindness.

SECTION 12: Ecological information

Toxicity

Following data for ethanol: When released into the soil, this material is expected to readily biodegrade, to leach into groundwater and to quickly evaporate. When released into water, this material is expected to readily biodegrade and may evaporate to a moderate extent. This material is not expected to significantly bioaccumulate. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals, to be readily removed from the atmosphere by dry and wet deposition and to have a half-life between 1 and 10 days.

[92] Ecotoxicity: Following data for ethanol: This material is not expected to be toxic to aquatic life.

SECTION 13: Disposal considerations

Disposal methods

Product disposal
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

Other disposal recommendations
Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

ADG (Road and Rail)
UN Number: 1993
Class: 3
Packing Group: III
Proper Shipping Name: FLAMMABLE LIQUID, N.O.S. (Contains 50% Ethanol)

Hazchem emergency action code (EAC)
•3Y

IMDG
UN Number: 1993
Class: 3
Packing Group: III
Proper Shipping Name: FLAMMABLE LIQUID, N.O.S. (Contains 50% Ethanol)

IATA
UN Number: 1993
Class: 3
Packing Group: III
Proper Shipping Name: FLAMMABLE LIQUID, N.O.S. (Contains 50% Ethanol)

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Australia SUSMP
Poison Schedule: NS

SECTION 16: Other information

Further information/disclaimer

ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of ChemSupply Australia Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

Preparation information

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Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'
Safe Work Australia, 'National Code of Practice fot the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.
Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.
Safe Work Australia, Workplace Exposure Standards for Airbourne Contaminants, December 2019
Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au
IATA, Dangerous Goods Regulations (DGR)
IMO, International Maritime Dangerous Goods Code (IMDG)