Safety Data Sheet

Bromophenol Blue, Free Acid (ACS Grade)

Cat. # RC-114

bromophenol blue

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Date of issue: 11/25/2015 Revision date: 1/17/2025 Supersedes: 1/14/2025 Version: 10.0

SECTION 1 Identification

1.1. Product identifier

Product form	:	Substance
Substance name	:	bromophenol blue
CAS-No.	:	115-39-9
Product code	:	218B_B156
Formula	:	C19H10Br4O5S
BIG No	:	18378

1.2. Other means of identification

Synonyms	:	3',3'',5',5''-tetrabromophenolsulfonephthalein / 3,3',5,5'-tetrabromophenolsulfonphthalein / 3',3'',5',5''-tetrabromophenolsulfonphthalein / 3',3'',5',5''-tetrabromophenolsulfophthalein / 4,4'(3H-2,1-benzoxathiol-3-ylidene)bis(2,6-dibromophenol)S,S-dioxide / albutest / alpha,alpha-bis(3,5-dibromo-4-hydroxyphenyl)alpha-hydroxy-ortho-toluene sulfonic acid gamma-sultone / BPB / bromophenol blue indicator / bromphenol blue / phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bis[2,6-dibromo-, S,S-dioxide / tetrabromophenol blue / tetrabromophenol sulfophthalein / tetrabromophenolsulfonephthalein / tetrabromophenolsulfonphthalein
EC-No.	:	204-086-2

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture	:	Laboratory chemical,Dyestuff

1.4. Supplier's details

G-Biosciences/ Geno Technology, Inc.
9800 Page Avenue
St. Louis, MO 63132-1429, USA
Tel.1-800-628-7730
www.GBiosciences.com

1.5. Emergency phone number

Emergency number	:	Chemtrec **1-800-424-9300** (USA/Canada), **+1-703-527-3887** (Intl)

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Not classified

2.2. Label elements

GHS US labeling

No labeling applicable

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Common Name (Synonyms)	Product identifier	%	GHS US classification
bromophenol blue (Main constituent)	3',3'',5',5''-tetrabromophenol sulfonephthalein / 3,3',5,5'-tetrabromophenol sulfonphthalein / 3',3'',5',5''-tetrabromophenol sulfonphthalein / 3',3'',5',5''-tetrabromophenol sulfophthalein / 4,4'(3H-2,1-benzoxathiol-3-ylidene)bis(2,6-dibromophenol)S,S-dioxide / albutest / alpha,alpha-bis(3,5-dibromo-4-hydroxyphenyl)alpha-hydroxy-ortho-toluene sulfonic acid gamma-sultone / BPB / bromophenol blue indicator / bromphenol blue / phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bis[2,6-dibromo-, S,S-dioxide / tetrabromophenol blue / tetrabromophenol sulfophthalein / tetrabromophenol sulfonephthalein / tetrabromophenol sulfonphthalein	CAS-No.: 115-39-9	100	Not classified

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : If you feel unwell, consult a doctor/medical service.
First-aid measures after inhalation : Remove victim into fresh air. In case of respiratory problems, consult a doctor/medical service.
First-aid measures after skin contact : If possible, wipe up/dry remove chemical. Then rinse/shower immediately with (lukewarm) water.
First-aid measures after eye contact : Rinse immediately with (lukewarm) water. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists, consult a doctor/medical service.
First-aid measures after ingestion : Rinse mouth with water. If you feel unwell, consult a doctor/medical service. Do not wait for symptoms to occur to consult Poison Center.
Self protection of the first-aider : First aid workers will be equipped with suitable personal protective equipment.

4.2. Most important symptoms/effects, acute and delayed

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.
Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/effects after inhalation : EXPOSURE TO HIGH CONCENTRATIONS: AFTER INHALATION OF DUST/MIST: Coughing. Slight irritation.
Symptoms/effects after skin contact : Not irritating.
Symptoms/effects after eye contact : Slight irritation. Redness of the eye tissue. Lacrimation.
Symptoms/effects after ingestion : No effects known.
Chronic symptoms : No effects known.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Quick-acting ABC powder extinguisher. Class A foam extinguisher. Water (quick-acting extinguisher, reel). Water. Class A foam.
Unsuitable extinguishing media : Quick-acting BC powder extinguisher. Quick-acting CO2 extinguisher.

5.2. Specific hazards arising from the chemical

Fire hazard : DIRECT FIRE HAZARD: Not classified as flammable. In finely divided state: increased fire hazard. INDIRECT FIRE HAZARD: Heating increases the fire hazard. Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard : DIRECT EXPLOSION HAZARD: May form explosible dust-air mixture if dispersed. INDIRECT EXPLOSION HAZARD: Dust cloud can be ignited by a spark. Reactions with explosion hazards: see "Reactivity Hazard".
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions : Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.
Protection during firefighting : Heat/fire exposure: self-contained breathing apparatus (EN 136 + EN 137).

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

For non-emergency personnel

Protective equipment : Gloves (EN 374). Protective clothing (EN 14605 or EN 13034). Dust cloud production: self-contained breathing apparatus (EN 136 + EN 137).

Emergency procedures : Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes.

Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Ventilate area. Evacuate unnecessary personnel.

Environmental precautions : Prevent soil and water pollution. Prevent spreading in sewers.

6.2. Methods and materials for containment and cleaning up

For containment : Contain released product, collect/pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. Powdered form: no compressed air for pumping over spills.

Methods for cleaning up : Stop dust cloud by humidifying. Scoop solid spill into closing containers. Powdered: do not use compressed air for pumping over spills. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

Other information : Dispose of materials or solid residues at an authorized site.

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid raising dust. Use earthed equipment. Keep away from naked flames/heat. In finely divided state: use spark-/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Clean contaminated clothing. Keep container tightly closed. Powdered form: no compressed air for pumping over.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.

Storage conditions : Store in a well-ventilated place. Keep cool. Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.

Storage area : Meet the legal requirements. Store in a dry area. Keep container in a well-ventilated place. Keep out of direct sunlight. Fireproof storeroom. Provide the tank with earthing.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

Information on mixed storage	:	KEEP SUBSTANCE AWAY FROM: oxidizing agents. reducing agents. (strong) acids. (strong) bases.
Storage temperature	:	5 – 30 °C
Heat-ignition	:	KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
Special rules on packaging	:	SPECIAL REQUIREMENTS: closing. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials	:	SUITABLE MATERIAL: metal.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls	:	Ensure good ventilation of the work station.
Environmental exposure controls	:	Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:
Avoid all unnecessary exposure.

Materials for protective clothing:
Excellent resistance: Nitrile rubber

Hand protection:
Protective gloves against chemicals (EN 374)

Eye protection:
Safety glasses (EN 166). In case of dust production: protective goggles (EN 166)

Skin and body protection:
Protective clothing (EN 14605 or EN 13034)

Respiratory protection:
Dust production: dust mask with filter type P1

Personal protective equipment symbol(s):

Other information:
Do not eat, drink or smoke during use.

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Crystalline solid. Powder.
Color	:	Yellow-red to blue
Odor	:	Phenol odour
Odor threshold	:	No data available
pH	:	3 – 4.6

Melting point	:	273 °C
Freezing point	:	Not applicable
Boiling point	:	No data available in the literature
Flash point	:	Not applicable
Flammability (solid, gas)	:	Non flammable.
Vapor pressure	:	< 0.1 hPa (20 °C)
Relative vapor density at 20°C	:	Not applicable (solid)
Relative density	:	0.73
Density	:	730 kg/m³
Molecular mass	:	669.99 g/mol
Solubility	:	Poorly soluble in water. Substance floats in water. Soluble in ethanol. Soluble in methanol. Soluble in acetic acid. Soluble in aromatic hydrocarbons. Soluble in bases. Water: 0.40 g/100ml
Partition coefficient n-octanol/water (Log Pow)	:	6.8 (Estimated value, KOWWIN)
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	279 °C
Viscosity, kinematic	:	Not applicable
Viscosity, dynamic	:	Not applicable (solid)
Explosion limits	:	Not applicable
Particle characteristics	:	Particle size : No data available in the literature

9.2. Data relevant with regard to physical hazard classes (supplemental)

Minimum ignition energy	:	No data available in the literature
Specific conductivity	:	No data available in the literature
SADT	:	Not applicable
VOC content	:	0 %
Other properties	:	Acid reaction.

SECTION 10 Stability and reactivity

10.1. Reactivity

Reacts violently with (strong) oxidizers and with (strong) reducers: (increased) risk of fire/explosion.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Not established.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Hazardous decomposition products. fume. Carbon monoxide. Carbon dioxide.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Not classified

Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified
Skin corrosion/irritation	:	Not classified pH: 3 – 4.6
Serious eye damage/irritation	:	Not classified pH: 3 – 4.6
Respiratory or skin sensitization	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
STOT-single exposure	:	Not classified
STOT-repeated exposure	:	Not classified
Aspiration hazard	:	Not classified

bromophenol blue (115-39-9)	
Viscosity, kinematic	Not applicable

Potential Adverse human health effects and symptoms	:	Based on available data, the classification criteria are not met.
Symptoms/effects	:	Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/effects after inhalation	:	EXPOSURE TO HIGH CONCENTRATIONS: AFTER INHALATION OF DUST/MIST: Coughing. Slight irritation.
Symptoms/effects after skin contact	:	Not irritating.
Symptoms/effects after eye contact	:	Slight irritation. Redness of the eye tissue. Lacrimation.
Symptoms/effects after ingestion	:	No effects known.
Chronic symptoms	:	No effects known.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general	:	The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
Ecology - air	:	Not included in the list of substances which may contribute to the greenhouse effect (IPCC). Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 2024/573). Not classified as dangerous for the ozone layer (Regulation (EC) No 2024/590).
Ecology - water	:	Forming sediments in water. pH shift.
Hazardous to the aquatic environment, short-term (acute)	:	Not classified
Hazardous to the aquatic environment, long-term (chronic)	:	Not classified

12.2. Persistence and degradability

bromophenol blue (115-39-9)	
Persistence and degradability	Biodegradable in the soil. Not readily biodegradable in water.

12.3. Bioaccumulative potential

bromophenol blue (115-39-9)	
BCF - Fish [1]	14000 (Pisces, Literature study, Calculated value)
Partition coefficient n-octanol/water (Log Pow)	6.8 (Estimated value, KOWWIN)
Bioaccumulative potential	High potential for bioaccumulation (BCF > 5000).

12.4. Mobility in soil

bromophenol blue (115-39-9)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	5.2 – 6.2 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Adsorbs into the soil.

12.5. Other adverse effects

Ozone : Not classified
Fluorinated greenhouse gases : No

Other information : Avoid release to the environment.

SECTION 13 Disposal considerations

Regional legislation (waste) : Disposal must be done according to official regulations.
Waste treatment methods : Waste treatment methods.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Do not discharge into drains or the environment. Dispose of at authorized waste collection point. Remove waste in accordance with local and/or national regulations.
Additional information : Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.
Ecological waste information : Avoid release to the environment.

SECTION 14 Transport information

In accordance with DOT / TDG / IATA

14.1. UN number

Not regulated for transport

14.2. UN Proper Shipping Name

Proper Shipping Name (DOT) : Not regulated
Proper Shipping Name (TDG) : Not applicable
Proper Shipping Name (IATA) : Not regulated

14.3. Transport hazard class(es)

DOT
Transport hazard class(es) (DOT) : Not regulated

TDG
Transport hazard class(es) (TDG) : Not applicable

IATA
Transport hazard class(es) (IATA) : Not regulated

14.4. Packing group

Packing group (DOT) : Not regulated
Packing group (TDG) : Not applicable
Packing group (IATA) : Not regulated

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT
Not regulated

TDG
No data available

IATA
Not regulated

SECTION 15 Regulatory information

15.1. Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
bromophenol blue	115-39-9	Not present	-	

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. State regulations

No additional information available

SECTION 16 Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision date : 1/17/2025
Date of issue : 11/25/2015
Other information : None.

Abbreviations and acronyms	
ACGIH	American Conference of Government Industrial Hygienists
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value

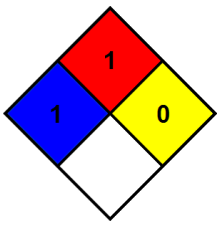
Abbreviations and acronyms	
BOD	Biochemical oxygen demand (BOD)
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
COD	Chemical oxygen demand (COD)
CSA	Chemical safety assessment
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
ED	Endocrine disruptor
EN	European Standard
EWC	European waste catalogue
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
Log Kow	Partition coefficient n-octanol/water (Log Kow)
Log Pow	Partition coefficient n-octanol/water (Log Pow)
MAK	maximum workplace concentration
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
N.O.S.	Not Otherwise Specified
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
OSHA	Occupational Safety & Health Administration
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
PPE	Personal protection equipment
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
TF	Technical function
ThOD	Theoretical oxygen demand (ThOD)

Abbreviations and acronyms	
TLM	Median Tolerance Limit
TWA	Time Weighted Average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative
UFI	Unique Formula Identifier

NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.