Safety Data Sheet

Cat. # RC-026

Bromophenol Blue (ACS Grade)

Size: 25g
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

<table>
<thead>
<tr>
<th>Product form</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance name</td>
<td>Bromophenol blue</td>
</tr>
<tr>
<td>EC-No.</td>
<td>204-086-2</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>115-39-9</td>
</tr>
<tr>
<td>Product code</td>
<td>218B_B156</td>
</tr>
<tr>
<td>Type of product</td>
<td>Pure substance</td>
</tr>
<tr>
<td>Formula</td>
<td>C19H10Br4O5S</td>
</tr>
<tr>
<td>Synonyms</td>
<td>3',3'',5',5''-tetrabromophenolsulfonephthalein / 3,3',5,5'-tetrabromophenolsulfonphthalein / 3',3''5,5''-tetrabromophenolsulfonphthalein / 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 / bromophenol blue / phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bis(2,6-dibromo-, S,S-dioxide / tetrabromophenol sulfophthalein / tetrabromophenolsulfonephthalein / tetrabromophenolsulfonphthalein</td>
</tr>
<tr>
<td>Product group</td>
<td>Raw material</td>
</tr>
<tr>
<td>BIG No</td>
<td>18378</td>
</tr>
</tbody>
</table>

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture: Laboratory chemical, Dyestuff

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Geno Technology, Inc./ G-Biosciences
9800 Page Avenue
63132-1429 Saint Louis - United States
T 800-628-7730 - F 314-991-1504
technical@GBiosciences.com - www.GBiosciences.com

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type: Mono-constituent

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bromophenol blue</td>
<td>(CAS-No.) 115-39-9 (EC-No.) 204-086-2</td>
<td>100</td>
<td>Not classified</td>
</tr>
</tbody>
</table>
3.2. Mixtures
Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact : Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.

First-aid measures after eye contact : Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Take victim to an ophthalmologist if irritation persists.


4.2. Most important symptoms and effects, both acute and delayed
Symptoms/effects after inhalation : EXPOSURE TO HIGH CONCENTRATIONS: AFTER INHALATION OF DUST/MIST: Coughing. Slight irritation.

Symptoms/effects after skin contact : Dry skin.

Symptoms/effects after eye contact : Slight irritation. Redness of the eye tissue. Lacrimation.

Chronic symptoms : No effects known.

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media


5.2. Special hazards arising from the substance or mixture
Fire hazard : DIRECT FIRE HAZARD: Non-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: Fine dust is explosive with air. 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. Advice for firefighters
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.


SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

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


6.1.2. For emergency responders
Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions
Prevent soil and water pollution. Prevent spreading in sewers.
6.3. Methods and material for containment and cleaning up

For containment:
- Contain released product, 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.

6.4. Reference to other sections
For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling:

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

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions:
- Store in a well-ventilated place. Keep cool.

Storage temperature:
- 5 - 30 °C

Heat and ignition sources:
- KEEP SUBSTANCE AWAY FROM: heat sources. Ignition sources.

Information on mixed storage:
- KEEP SUBSTANCE AWAY FROM: oxidizing agents. reducing agents. (strong) acids. (strong) bases.

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

Special rules on packaging:
- SPECIAL REQUIREMENTS: closing, clean, correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

Packaging materials:
- SUITABLE MATERIAL: metal.

7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
No additional information available

8.2. Exposure controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

Materials for protective clothing:
- GIVE EXCELLENT RESISTANCE: nitrile rubber

Hand protection:
- Protective gloves against chemicals (EN374)

Eye protection:
- Safety glasses. In case of dust production: protective goggles

Skin and body protection:
- Protective clothing

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

Environmental exposure controls:
- Avoid release to the environment.
SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Solid
Appearance: Crystalline solid. Powder.
Molecular mass: 669.99 g/mol
Colour: Yellow-red to blue.
Odour: Phenol odour.
Odour threshold: No data available
pH: 3.0 - 4.6
Relative evaporation rate (butylacetate=1): No data available
Melting point: 273 °C
Freezing point: Not applicable
Boiling point: Not applicable
Flash point: Not applicable
Auto-ignition temperature: Not applicable
Decomposition temperature: 279 °C
Flammability (solid, gas): Non flammable.
Vapour pressure: < 0.1 hPa (20 °C)
Relative vapour density at 20 °C: Not applicable
Relative density: 0.73
Density: 730 kg/m³

Log Pow: 6.77 (Estimated value, KOWWIN)
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
Explosive properties: No data available
Explosive limits: Not applicable

9.2. Other information

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.

10.4. Conditions to avoid
None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials
No additional information available

10.6. Hazardous decomposition products
Hazardous decomposition products.

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: 3.0 - 4.6
Serious eye damage/irritation: Not classified
pH: 3.0 - 4.6
Respiratory or skin sensitisation: 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

SECTION 12: Ecological information

12.1. Toxicity
Ecology - general: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Ecology - water: Forming sediments in water. pH shift.
Acute aquatic toxicity: Not classified
Chronic aquatic toxicity: 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)
Log Pow: 6.77 (Estimated value, KOWWIN)
Bioaccumulative potential: High potential for bioaccumulation (BCF > 5000).

12.4. Mobility in soil
Bromophenol blue (115-39-9)
Log Koc: 5.165 - 6.185 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil: Adsorbs into the soil.

12.5. Results of PBT and vPvB assessment
Bromophenol blue (115-39-9)
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Product/Packaging disposal recommendations: Do not discharge into drains or the environment. Remove waste in accordance with local and/or national regulations. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery.
European List of Waste (LoW) code: 15 01 04 - metallic packaging

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number
UN-No. (ADR): Not regulated
UN-No. (IMDG): Not regulated
UN-No. (IATA): Not regulated
UN-No. (ADN): Not regulated
UN-No. (RID): Not regulated

14.2. UN proper shipping name
Proper Shipping Name (ADR): Not regulated
Proper Shipping Name (IMDG): Not regulated
Proper Shipping Name (IATA): Not regulated
Proper Shipping Name (ADN): Not regulated
### Bromophenol blue

**Safety Data Sheet**

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

<table>
<thead>
<tr>
<th>Proper Shipping Name (RID)</th>
<th>Not regulated</th>
</tr>
</thead>
</table>

**14.3. Transport hazard class(es)**

| ADR | Not regulated |
| IMDG | Not regulated |
| IATA | Not regulated |
| ADN | Not regulated |
| RID | Not regulated |

**14.4. Packing group**

| ADR | Not regulated |
| IMDG | Not regulated |
| IATA | Not regulated |
| ADN | Not regulated |
| RID | Not regulated |

**14.5. Environmental hazards**

| Dangerous for the environment | No |
| Marine pollutant | No |
| Other information | No supplementary information available |

**14.6. Special precautions for user**

| Overland transport | Not regulated |
| Transport by sea | Not regulated |
| Air transport | Not regulated |
| Inland waterway transport | Not regulated |
| Rail transport | Not regulated |

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable

---

**SECTION 15: Regulatory information**

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

**15.1.1. EU-Regulations**

No REACH Annex XVII restrictions
Bromophenol blue is not on the REACH Candidate List
Bromophenol blue is not on the REACH Annex XIV List
Bromophenol blue is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

VOC content : 0 %

**15.1.2. National regulations**

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

**15.2. Chemical safety assessment**

No chemical safety assessment has been carried out

---

**SECTION 16: Other information**

Safety Data Sheet applicable for regions : GB - United Kingdom
Bromophenol blue
Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SDS EU (REACH Annex II)
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.