



From: Avantor Performance Materials, Inc.  
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24 Hour Emergency Telephone: 908-859-2151  
CHEMTREC: 1-800-424-9300

National Response in Canada  
CANUTEC: 613-996-6666

Outside U.S. and Canada  
Chemtrec: 703-527-3887

**NOTE:** CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service, 1-855-AVANTOR (855-282-6867) for assistance.

## BROMOTHYMOL BLUE

### 1. Product Identification

**Synonyms:** 3,3',-Dibromothymolsulfonphthalein; 4,4'-(3H-2,1 Benzoxathiol-3-ylidene) bis [2 bromo-3-methyl-6-(1-methylethyl)phenol] S,S-dioxide

**CAS No.:** 76-59-5

**Molecular Weight:** 624.38

**Chemical Formula:** C<sub>27</sub>H<sub>28</sub>Br<sub>2</sub>O<sub>5</sub>S

**Product Codes:** D470

### 2. Composition/Information on Ingredients

| Ingredient       | CAS No  | Percent   | Hazardous |
|------------------|---------|-----------|-----------|
| Bromothymol Blue | 76-59-5 | 90 - 100% | Yes       |

### 3. Hazards Identification

#### Emergency Overview

**CAUTION! MAY BE HARMFUL IF SWALLOWED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.**

**SAF-T-DATA<sup>(tm)</sup>** Ratings (Provided here for your convenience)

Health Rating: 1 - Slight

Flammability Rating: 1 - Slight

Reactivity Rating: 1 - Slight

Contact Rating: 1 - Slight

Lab Protective Equip: GOGGLES; LAB COAT; PROPER GLOVES

Storage Color Code: Green (General Storage)

#### Potential Health Effects

Limited health information was found in the published literature to perform a complete hazard evaluation for this substance. Special precautions must be used in handling and storage. Protective equipment should be chosen using professional judgment.

**Inhalation:**

No specific information found. Probably irritating to respiratory tract.

**Ingestion:**

Effects not determined. Probably irritating to the gastro-intestinal tract.

**Skin Contact:**

No specific information found. Probably irritating to moist skin.

**Eye Contact:**

No specific information found. Probably irritating to eye tissues.

**Chronic Exposure:**

Not determined.

**Aggravation of Pre-existing Conditions:**

No information found.

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## 4. First Aid Measures

**Inhalation:**

Remove to fresh air. Get medical attention for any breathing difficulty.

**Ingestion:**

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person.

**Skin Contact:**

Remove any contaminated clothing. Wash skin with soap or mild detergent and water for at least 15 minutes. Get medical attention if irritation develops or persists.

**Eye Contact:**

Wash eyes with plenty of water for at least 15 minutes. Call a physician.

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## 5. Fire Fighting Measures

**Fire:**

As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.

**Explosion:**

Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

**Fire Extinguishing Media:**

Water spray, dry chemical, alcohol foam, or carbon dioxide.

**Special Information:**

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

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## 6. Accidental Release Measures

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container.

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## 7. Handling and Storage

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

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## 8. Exposure Controls/Personal Protection

### **Airborne Exposure Limits:**

None established.

### **Ventilation System:**

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

### **Personal Respirators (NIOSH Approved):**

For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator.

WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

### **Skin Protection:**

Gloves and lab coat, apron or coveralls.

### **Eye Protection:**

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

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## 9. Physical and Chemical Properties

Little information was found in the literature.

### **Appearance:**

Yellow crystals.

### **Odor:**

Characteristic odor.

### **Solubility:**

Very slightly soluble in water.

### **Specific Gravity:**

No information found.

### **pH:**

No information found.

### **% Volatiles by volume @ 21C (70F):**

0

### **Boiling Point:**

Not applicable.

### **Melting Point:**

200 - 202C (392 - 396F)

### **Vapor Density (Air=1):**

No information found.

### **Vapor Pressure (mm Hg):**

No information found.

### **Evaporation Rate (BuAc=1):**

No information found.

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## 10. Stability and Reactivity

**Stability:**

Stable under ordinary conditions of use and storage.

**Hazardous Decomposition Products:**

Burning may produce bromines, sulfur oxides, carbon dioxide, and carbon monoxide.

**Hazardous Polymerization:**

Will not occur.

**Incompatibilities:**

Strong oxidizers.

**Conditions to Avoid:**

Incompatibles.

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## 11. Toxicological Information

No LD50/LC50 information found relating to normal routes of occupational exposure. Investigated as a mutagen.

-----\Cancer Lists\-----

| Ingredient                 | ---NTP Carcinogen--- |             | IARC Category |
|----------------------------|----------------------|-------------|---------------|
|                            | Known                | Anticipated |               |
| Bromothymol Blue (76-59-5) | No                   | No          | None          |

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## 12. Ecological Information

**Environmental Fate:**

No information found.

**Environmental Toxicity:**

No information found.

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## 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

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## 14. Transport Information

Not regulated.

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## 15. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----

| Ingredient                 | TSCA | EC  | Japan | Australia |
|----------------------------|------|-----|-------|-----------|
| Bromothymol Blue (76-59-5) | Yes  | Yes | No    | Yes       |

-----\Chemical Inventory Status - Part 2\-----

| Ingredient | --Canada-- |     |      |       |
|------------|------------|-----|------|-------|
|            | Korea      | DSL | NDSL | Phil. |
|            |            |     |      |       |

| -----\Federal, State & International Regulations - Part 1\----- |                  |                  |                    |                |
|---|------------------|------------------|--------------------|----------------|
| Ingredient  | -SARA 302-<br>RQ | TPQ              | -SARA 313-<br>List | Chemical Catg. |
| Bromothymol Blue (76-59-5)                                      | No               | No               | No                 | No             |
| -----\Federal, State & International Regulations - Part 2\----- |                  |                  |                    |                |
| Ingredient  | CERCLA           | -RCRA-<br>261.33 | -TSCA-<br>8(d)     |                |
| Bromothymol Blue (76-59-5)                                      | No               | No               | No                 |                |

Chemical Weapons Convention: No      TSCA 12(b): No      CDTA: No  
SARA 311/312: Acute: Yes      Chronic: No      Fire: No      Pressure: No  
Reactivity: No      (Pure / Solid)

**Australian Hazchem Code:** None allocated.

**Poison Schedule:** None allocated.

**WHMIS:**

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

## 16. Other Information

**NFPA Ratings:** Health: 1 Flammability: 1 Reactivity: 0

**Label Hazard Warning:**

CAUTION! MAY BE HARMFUL IF SWALLOWED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

**Label Precautions:**

- Wash thoroughly after handling.
- Avoid contact with eyes, skin and clothing.
- Avoid breathing dust.
- Store in a tightly closed container.
- Use with adequate ventilation.

**Label First Aid:**

If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. If irritation develops call a physician. If inhaled, remove to fresh air. Get medical attention for any breathing difficulty.

**Product Use:**

Laboratory Reagent.

**Revision Information:**

No Changes.

**Disclaimer:**

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**Prepared by: Environmental Health & Safety**