Material Safety Data Sheet
Bromothymol Blue Solution 0.04%

MSDS# 40091

Section 1 - Chemical Product and Company Identification

MSDS Name: Bromothymol Blue Solution 0.04%
Catalog Numbers: S71889-1, SI22-500
Synonyms: None.

Company Identification:
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call:
201-796-7100
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

Risk Phrases:
CAS#: 64-02-8
Chemical Name: Tetrasodium EDTA
%: 0.02
EINECS#: 200-573-9

Hazard Symbols:

Risk Phrases:
CAS#: 7732-18-5
Chemical Name: Water
%: 99.94
EINECS#: 231-791-2

Hazard Symbols:

Risk Phrases:
CAS#: 34722-90-2
Chemical Name: Bromothymol blue sodium salt
%: 0.04
EINECS#: 252-169-7

Hazard Symbols:

Text for R-phrases: see Section 16
Hazard Symbols: None listed
Risk Phrases: None listed

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Caution! This is expected to be a low hazard for usual industrial handling. May cause eye, skin, and respiratory tract irritation. Target Organs: None.

Potential Health Effects
Eye: May cause eye irritation. Low hazard for normal industrial handling.
Skin: May cause skin irritation. Low hazard for usual industrial handling.
Ingestion: Low hazard for usual industrial handling.
Inhalation: Low hazard for usual industrial handling.
Chronic: No information found.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin: Get medical aid if irritation develops or persists. Flush skin with plenty of soap and water.
Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid if irritation or symptoms occur.
Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

Extinguishing Media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Autoignition Temperature: Not applicable.
Flash Point: Not applicable.

Explosion Limits: Not available

Lower:
Explosion Limits: Not available

Upper:

NFPA Rating: health: 0; flammability: 0; instability: 0;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse.
Storage: Store in a cool, dry place.

Section 8 - Exposure Controls, Personal Protection

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrasodium EDTA</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Water</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Bromothymol blue sodium salt</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs: Tetrasodium EDTA: None listed Water: None listed Bromothymol blue sodium salt: None listed

Engineering Controls:
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits
Personal Protective Equipment
Eyes: Wear chemical splash goggles.
Eyes: Wear chemical splash goggles.
Skin: Wear butyl rubber gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: Respirator protection is not normally required.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Color: dark green
Odor: odorless
pH: Not available
Vapor Pressure: 14 mm Hg @20 deg C
Vapor Density: Not available
Evaporation Rate: >1
Viscosity: Not available
Boiling Point: 100 deg C (212.00°F)
Freezing/Melting Point: 0 deg C (32.00°F)
Decomposition Temperature: Not available
Solubility in water: Soluble in water.
Specific Gravity/Density: 1
Molecular Formula: Mixture
Molecular Weight: 0

Section 10 - Stability and Reactivity

Chemical Stability: Stable.
Conditions to Avoid: None reported.
Incompatibilities with Other Materials: Not available
Hazardous Decomposition Products: None.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

CAS# 64-02-8: AH5075000
CAS# 7732-18-5: ZC0110000
CAS# 34722-90-2: None listed

RTECS:
CAS# 64-02-8: Draize test, rabbit, eye: 1900 ug; Draize test, rabbit, eye: 100 mg/24H Moderate; Draize test, rabbit, skin: 500 mg/24H Moderate;
CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg;
CAS# 34722-90-2:

Tetrasodium EDTA - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Bromothymol blue sodium salt - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: Not Regulated
Hazard Class:
UN Number:
Packing Group:
Canada TDG
Shipping Name: Not regulated as a hazardous material
Hazard Class:
UN Number:
Packing Group:

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives
Hazard Symbols: Not available
Risk Phrases:
Safety Phrases:
   S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)
   CAS# 64-02-8: 2
   CAS# 7732-18-5: Not available
   CAS# 34722-90-2: Not available

Canada
   CAS# 64-02-8 is listed on Canada's DSL List
   CAS# 7732-18-5 is listed on Canada's DSL List
   CAS# 34722-90-2 is listed on Canada's DSL List
   Canadian WHMIS Classifications: Not controlled.
   This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.
   CAS# 64-02-8 is not listed on Canada's Ingredient Disclosure List.
   CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.
   CAS# 34722-90-2 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA
   CAS# 64-02-8 is listed on the TSCA Inventory.
   CAS# 7732-18-5 is listed on the TSCA Inventory.
   CAS# 34722-90-2 is listed on the TSCA Inventory.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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Revision #6 Date 7/20/2009