Methylene Blue, 0.1%

Section 1  Product Description

Product Name: Methylene Blue, 0.1%
Recommended Use: Science education applications
Synonyms: Basic Blue 9, Methylene Blue Chloride, C.I. #52015
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2  Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

GHS Classification:
Acute Toxicity - Oral Category 5

Section 3  Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>99.9</td>
</tr>
<tr>
<td>Methylene Blue Chloride</td>
<td>61-73-4</td>
<td>0.1</td>
</tr>
</tbody>
</table>

Section 4  First Aid Measures

Emergency and First Aid Procedures
Inhalation: In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact: After contact with skin, wash immediately with plenty of water.
Ingestion: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Section 5  Firefighting Procedures

Extinguishing Media: Use media suitable to extinguish surrounding fire.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: Fire or excessive heat may produce hazardous decomposition products.
Hazardous Combustion Products: Carbon dioxide, Carbon monoxide

Section 6  Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled:
Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill. Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

Section 7  Handling and Storage
Safety Data Sheet

Storage: Keep container tightly closed in a cool, well-ventilated place.
Storage Code: Green - general chemical storage

Section 8 Protection Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH (TWA)</th>
<th>(STEL)</th>
<th>OSHA PEL (TWA)</th>
<th>(STEL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene Blue Chloride</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Control Parameters

Engineering Measures: No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

Personal Protective Equipment (PPE):

Respiratory Protection: No respiratory protection required under normal conditions of use. Provide general room exhaust ventilation if symptoms of overexposure occur as explained Section 11. A respirator is not normally required.

Eye Protection: Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection: Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves: No information available

Section 9 Physical Data

Formula: C16H18ClN3S (aq)
Molecular Weight: No data available
Appearance: Blue Green Liquid
Odor: None
Odor Threshold: No data available
pH: No data available
Melting Point: 0 C
Boiling Point: 100 C
Flash Point: No data available
Flammable Limits in Air: No data available

Vapor Pressure: No data available
Evaporation Rate (BuAc=1): No data available
Vapor Density (Air=1): No data available
Specific Gravity: 1
Solubility in Water: Soluble
Log Pow (calculated): No data available
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available
Percent Volatile by Volume: No data available

Section 10 Reactivity Data

Reactivity: Not generally reactive under normal conditions.
Chemical Stability: Stable under normal conditions.
Conditions to Avoid: Exposure to light.
Incompatible Materials: Water-reactive materials
Hazardous Polymerization: Will not occur

Section 11 Toxicity Data

Routes of Entry: Ingestion, Skin contact.
Symptoms (Acute): Methemoglobinemia, Anemia
Delayed Effects: No data available

Acute Toxicity:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methylene Blue Chloride</td>
<td>61-73-4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Carcinogenicity:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene Blue Chloride</td>
<td>61-73-4</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Methylene Blue, 0.1%
Chronic Effects:

Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: No evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: No evidence of negative reproductive effects.

Target Organ Effects:
Acute: No data available
Chronic: No data available

Section 12 Ecological Data

Overview: This material is not expected to be harmful to the ecology.
Mobility: This material is expected to have moderate mobility in soil. It absorbs to most soil types.
Persistence: Adsorbs to soil, Photodegradation
Bioaccumulation: No data
Degradability: Biodegrades at a moderate rate.
Other Adverse Effects: No data

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Eco Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Section 13 Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): Not Determined

Section 14 Transport Information

Ground - DOT Proper Shipping Name: Not regulated for transport by US DOT.
Air - IATA Proper Shipping Name: Not regulated for air transport by IATA.

Section 15 Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>§ 313 Name</th>
<th>§ 304 RQ</th>
<th>CERCLA RQ</th>
<th>§ 302 TPQ</th>
<th>CAA 112(2) TQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene Blue Chloride</td>
<td>61-73-4</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Section 16 Additional Information

Revised: 09/09/2015
Replaces: 08/28/2015
Printed: 10-29-2015

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Governmental Hygienists</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstract Service Number</td>
</tr>
<tr>
<td>CERCLA</td>
<td>Comprehensive Environmental Response, Compensation, and Liability Act</td>
</tr>
<tr>
<td>DOT</td>
<td>U.S. Department of Transportation</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>N/A</td>
<td>Not Available</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration</td>
</tr>
<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
</tr>
<tr>
<td>ppm</td>
<td>Parts per million</td>
</tr>
<tr>
<td>RCRA</td>
<td>Resource Conservation and Recovery Act</td>
</tr>
<tr>
<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act</td>
</tr>
<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td>TSCA</td>
<td>Toxic Substances Control Act</td>
</tr>
<tr>
<td>IDLH</td>
<td>Immediately dangerous to life and health</td>
</tr>
</tbody>
</table>