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

1.1. Product identifier
- Product form: Mixture
- Product name: Methylene Blue, 0.1% Aqueous
- Product code: LC16900
- Other means of identification: Basic Blue 9, 0.1% w/v

1.2. Relevant identified uses of the substance or mixture and uses advised against
- Use of the substance/mixture: For laboratory and manufacturing use only.

1.3. Details of the supplier of the safety data sheet
- LabChem Inc
- Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
- Zelienople, PA 16063 - USA
- T 412-826-5230 - F 724-473-0647
- info@labchem.com - www.labchem.com

1.4. Emergency telephone number
- Emergency number: CHEMTREC: 1-800-424-9300 or 011-703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
- GHS-US classification: Not classified

2.2. Label elements
- GHS-US labelling: No labelling applicable

2.3. Other hazards
- Other hazards not contributing to the classification: None.

2.4. Unknown acute toxicity (GHS-US)
- No data available

SECTION 3: Composition/information on ingredients

3.1. Substance
- Not applicable

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>(CAS No) 7732-18-5</td>
<td>99.9</td>
<td>Not classified</td>
</tr>
<tr>
<td>Methylene Blue</td>
<td>(CAS No) 61-73-4</td>
<td>0.1</td>
<td>Acute Tox. 4 (Oral), H302 Aquatic Acute 2, H401</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1. Description of first aid measures
- First-aid measures general: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation: Assure fresh air breathing. Allow the victim to rest.
- First-aid measures after skin contact: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.
**Methylene Blue, 0.1% Aqueous**  
*Safety Data Sheet*

accordiing to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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### 4.2. Most important symptoms and effects, both acute and delayed

<table>
<thead>
<tr>
<th>Symptoms/injuries</th>
<th>Not expected to present a significant hazard under anticipated conditions of normal use.</th>
</tr>
</thead>
</table>

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

<table>
<thead>
<tr>
<th>None.</th>
</tr>
</thead>
</table>

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsuitable extinguishing media</td>
<td>Do not use a heavy water stream.</td>
</tr>
</tbody>
</table>

#### 5.2. Special hazards arising from the substance or mixture

<table>
<thead>
<tr>
<th>Fire hazard</th>
<th>Not flammable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explosion hazard</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Reactivity</td>
<td>None.</td>
</tr>
</tbody>
</table>

#### 5.3. Advice for firefighters

<table>
<thead>
<tr>
<th>Firefighting instructions</th>
<th>Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protection during firefighting</td>
<td>Do not enter fire area without proper protective equipment, including respiratory protection.</td>
</tr>
</tbody>
</table>

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

<table>
<thead>
<tr>
<th>For non-emergency personnel</th>
<th>Evacuate unnecessary personnel.</th>
</tr>
</thead>
<tbody>
<tr>
<td>For emergency responders</td>
<td>Equip cleanup crew with proper protection.</td>
</tr>
<tr>
<td>Emergency procedures</td>
<td>Ventilate area.</td>
</tr>
</tbody>
</table>

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

<table>
<thead>
<tr>
<th>Methods for cleaning up</th>
<th>Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.</th>
</tr>
</thead>
</table>

#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

<table>
<thead>
<tr>
<th>Precautions for safe handling</th>
<th>Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.</th>
</tr>
</thead>
</table>

#### 7.2. Conditions for safe storage, including any incompatibilities

<table>
<thead>
<tr>
<th>Storage conditions</th>
<th>Keep container closed when not in use.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incompatible materials</td>
<td>Sources of ignition. Direct sunlight.</td>
</tr>
</tbody>
</table>

#### 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

<table>
<thead>
<tr>
<th>Appropriate engineering controls</th>
<th>Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal protective equipment</td>
<td>Avoid all unnecessary exposure.</td>
</tr>
<tr>
<td>Hand protection</td>
<td>Wear protective gloves.</td>
</tr>
</tbody>
</table>
### SECTION 9: Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Blue</td>
</tr>
<tr>
<td>Odour</td>
<td>None.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>pH solution</td>
<td>3 - 4.5</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>190 °C</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>1 g/ml</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water.</td>
</tr>
<tr>
<td>Water: Solubility in water of component(s) of the mixture:</td>
<td></td>
</tr>
<tr>
<td>• Methylene Blue: 2.5 g/100ml</td>
<td></td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>None.</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

None.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

#### 10.5. Incompatible materials


#### 10.6. Hazardous decomposition products

**SECTION 11: Toxicological information**

### 11.1. Information on toxicological effects

#### Acute toxicity

- **Methylene Blue (61-73-4)**
  - LD50 oral rat: 1180 mg/kg (Rat)
  - ATE US (oral): 1180 mg/kg bodyweight

- **Water (7732-18-5)**
  - LD50 oral rat: \(\geq 90000\) mg/kg
  - ATE US (oral): 90000 mg/kg bodyweight

#### Skin corrosion/irritation

- Not classified

#### Serious eye damage/irritation

- Not classified

#### Respiratory or skin sensitisation

- Not classified

#### Germ cell mutagenicity

- Not classified

#### Carcinogenicity

- Not classified

#### Reproductive toxicity

- Not classified

#### Specific target organ toxicity (single exposure)

- Not classified

#### Specific target organ toxicity (repeated exposure)

- Not classified

#### Aspiration hazard

- Not classified

#### Potential adverse human health effects and symptoms

- Based on available data, the classification criteria are not met

**SECTION 12: Ecological information**

### 12.1. Toxicity

- **Methylene Blue (61-73-4)**
  - LC50 fishes 1: 13 mg/l (48 h; Oryzias latipes)
  - EC50 Daphnia 1: 2.26 mg/l (48 h; Daphnia magna)
  - LC50 fish 2: 18 mg/l (96 h; Mystus vittatus)
  - EC50 Daphnia 2: 4.93 mg/l (24 h; Daphnia magna)
  - TLM fish 1: 10 - 100, 48 h; Poecilia reticulata

### 12.2. Persistence and degradability

- **Methylene Blue, 0.1% Aqueous**
  - Persistence and degradability: Not established.

- **Methylene Blue (61-73-4)**
  - Persistence and degradability: Biodegradability in water: no data available. Photodegradation in the air.

- **Water (7732-18-5)**
  - Persistence and degradability: Not established.

### 12.3. Bioaccumulative potential

- **Methylene Blue, 0.1% Aqueous**
  - Bioaccumulative potential: Not established.

- **Methylene Blue (61-73-4)**
  - Log Pow: 5.85 (Estimated value)
  - Bioaccumulative potential: Not bioaccumulative.

- **Water (7732-18-5)**
  - Bioaccumulative potential: Not established.
12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
Effect on ozone layer : No additional information available
Effect on the global warming : No known ecological damage caused by this product.
Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT
Not regulated for transport

Additional information
Other information : No supplementary information available.

ADR
Transport document description :

Transport by sea
No additional information available

Air transport
No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations
All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory
This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA
Methylene Blue, 0.1% Aqueous
WHMIS Classification : Uncontrolled product according to WHMIS classification criteria

Methylene Blue (61-73-4)
Listed on the Canadian DSL (Domestic Substances List)
WHMIS Classification : Uncontrolled product according to WHMIS classification criteria

Water (7732-18-5)
Listed on the Canadian DSL (Domestic Substances List)
WHMIS Classification : Uncontrolled product according to WHMIS classification criteria

EU-Regulations
No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Classification according to Directive 67/548/EEC or 1999/45/EC
Not classified

15.2.2. National regulations
No additional information available
SECTION 16: Other information

Indication of changes: Revision - See : *.

Other information: None.

Full text of H-phrases: see section 16:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 4 (Oral)</td>
<td>Acute toxicity (oral), Category 4</td>
</tr>
<tr>
<td>Aquatic Acute 2</td>
<td>Hazardous to the aquatic environment — Acute Hazard, Category 2</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H401</td>
<td>Toxic to aquatic life</td>
</tr>
</tbody>
</table>

NFPA health hazard: 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard: 0 - Materials that will not burn.

NFPA reactivity: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

HMIS III Rating

Health: 1 - Slight Hazard - Irritation or minor reversible injury possible

Flammability: 0 - Minimal Hazard

Physical: 0 - Minimal Hazard

Personal Protection: B

SDS US (GHS HazCom 2012)

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