Section I - Product Identification

An aqueous solution of Toluidine Blue O.

Section II - Hazards Identification

Overview: May be harmful if swallowed. May be irritating to skin and eyes.

Safety Ratings

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slight</td>
<td>None</td>
<td>None</td>
<td>Slight</td>
</tr>
</tbody>
</table>

Recommended safety equipment: Generally not required.
Storage: General storage

NFPA Ratings

Health = 1  Flammability = 0  Reactivity = 0

Potential Health Effects

The toxicology of this compound has not been completely examined. It is presumed that the toxicity of this item is similar to other weak acids.

Inhalation: May be irritating

Ingestion: While the toxicity of this compound is low, large doses may cause nausea, vomiting, diarrhea, etc.

Skin contact: Not normally a problem

Eye contact: May be irritating

Chronic Exposure: Unknown

Aggravation of preexisting conditions: Unknown

Section III - Composition/Information on Components

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS#</th>
<th>OSHA Pel</th>
<th>ACGIH TLV</th>
<th>Other Limits</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluidine Blue O</td>
<td>92-31-9</td>
<td>---------</td>
<td>---------</td>
<td>--------------</td>
<td>1.0% w/v</td>
</tr>
</tbody>
</table>

Section IV - First Aid Measures

Inhalation: Unlikely to be a problem. Remove from source of exposure and get medical attention for any breathing difficulty.

Ingestion: If the victim is conscious, induce vomiting. Never give anything by mouth to an unconscious person.

Skin Contact: Wash affected area with soap and water. Get medical advice if irritation develops.

Eye Contact: Rinse thoroughly with running water. Get medical advice if irritation develops.
Section V - Fire Fighting Measures

*Flash point:* Not applicable.
*Flammable Limits:* Not applicable.
*Fire:* Not normally a fire Hazard.
*Explosion:* Not Normally an explosion hazards.
*Fire Extinguishing Media:* Any means suitable for surrounding fire.
*Special information:* Pyrolysis will release corrosive oxides.

Section VI - Accidental Release Measures

Absorb with a suitable absorbent (such as paper towels) and store in a suitable container for disposal.

Section VII - Handling and Storage

Store in a closed container, protected from freezing.

Section VIII - Exposure Control/Personal Protection

*Airborne Exposure Limits:* See section III.

*Ventilation System:* Usually not required. When required, Refer to the ACGIH document, "Industrial Ventilation, a Manual of Recommended Practices" for details about ventilation.
*Personal Respirator:* Usually not required.
*Skin protection:* Protective gloves are not required but recommended as part of good laboratory practice.
*Eye Protection:* Laboratory safety goggles or similar products are not required but recommended as part of good laboratory practice.

Section IX - Physical and Chemical Properties

*Boiling Point:* 100 °C
*Vapor pressure (mm Hg):* 18 @ 20 °C
*Vapor Density (air = 1):* 0.6
*Appearance and Odor:* An opaque purple liquid.

*Density:* 1.01 g/ml
*Evaporation Rate (water = 1):* 1
*Solubility:* Infinitely miscible with water

Section X - Stability and Reactivity

*Stability:* Freezes at low temperature.
*Hazardous Decomposition Products:* Nothing unusual.
*Hazardous polymerization:* Will not occur.
*Incompatibilities:* Nothing unusual.
*Conditions to avoid:* Excessive cold/heat and light.

Section XI - Toxicological Information

None relating to normal exposure.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Known Carcinogenicity?</th>
<th>Anticipated?</th>
<th>IARC Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluidine Blue O</td>
<td>No</td>
<td>No</td>
<td>None</td>
</tr>
</tbody>
</table>

Section XII - Ecological Information

*Environmental Fate:* Biodegradable.
*Environmental Toxicity:* None.
Section XIII - Disposal Considerations

Waste disposal is usually not restricted but local ordinances vary. Dispose of contents and container in accord with all applicable regulations.

Section XIV - Transportation Information

Not regulated.

Section XV - Regulatory Information

Chemical Inventory Status

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>TSCA</th>
<th>EC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluidine Blue O</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Federal, State and International Regulations

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>SARA 302</th>
<th>SARA 313</th>
<th>RCRA</th>
<th>TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluidine Blue O</td>
<td>RQ: No</td>
<td>TPQ: No</td>
<td>List: No</td>
<td>Category: No</td>
</tr>
</tbody>
</table>

Chemical Weapons Convention: No  TSCA 12(b): No  CDTA: No
SARA 311/312: Acute: No, Chronic: No, Fire: No

Section XVI - Other Information

This information is believed to be correct but is not warranted as such, nor does it purport to be all inclusive.

Revision Date: Jan. 16, 2018