Section 1 Chemical Product and Company Identification

Product: METHYLENE BLUE CHLORIDE, 1% AQUEOUS SOLUTION
Synonyms: Methylene Blue Chloride, Water Solution

Section 2 Hazards Identification

Signal word: WARNING
Pictograms: No symbol required
Target organs: None known

GHS Classification:
Acute toxicity, oral (Category 5)

GHS Label information:
Hazard statement(s):
H303: May be harmful if swallowed.

Precautionary statement(s):
P312: Call a POISON CENTER or doctor if you feel unwell.

Section 3 Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>%</th>
<th>EINECS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>98.8%</td>
<td>231-791-2</td>
</tr>
<tr>
<td>Methylene blue chloride</td>
<td>61-73-4</td>
<td>1.0%</td>
<td>200-515-2</td>
</tr>
<tr>
<td>Sodium benzoate, as preservative</td>
<td>532-32-1</td>
<td>0.2%</td>
<td>208-534-8</td>
</tr>
</tbody>
</table>

Section 4 First Aid Measures

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.
Section 7 Handling & Storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8 Exposure Controls / Personal Protection

<table>
<thead>
<tr>
<th>Exposure Limits:</th>
<th>Chemical Name</th>
<th>ACGIH (TLV)</th>
<th>OSHA (PEL)</th>
<th>NIOSH (REL)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Methylene blue chloride</td>
<td>None established</td>
<td>None established</td>
<td>None established</td>
</tr>
</tbody>
</table>

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or face shield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Dark blue liquid.
Odor: No odor.
Odor threshold: Data not available.
PH: Data not available.
Melting / Freezing point: ~0°C (32°F) (water).
Boiling point: ~100°C (212°F) (water).
Flash point: Data not available.

Evaporation rate (Water = 1): <1
Flammability (solid/gas): Data not available.
Explosion limits: Lower / Upper: Data not available.
Vapor pressure (mm Hg): 14 (water).
Vapor density (Air = 1): 0.7 (water).
Relative density (Specific gravity): Approximately 1.1
Solubility(ies): Complete in water.
Partition coefficient: Data not available.
Auto-ignition temperature: Data not available.
Decomposition temperature: Data not available.
Viscosity: Data not available.
Molecular formula: Mixture
Molecular weight: Mixture

Section 10 Stability & Reactivity

Chemical stability: Stable
Hazardous polymerization: Will not occur.
Conditions to avoid: Excessive temperatures which cause evaporation. Stable under recommended storage conditions.

Incompatibilities with other materials: Strong oxidizing materials and reducers.

Hazardous decomposition products: Sulfur oxides, nitrogen oxides, hydrogen chloride gas.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 1180 mg/kg [Methylene blue chloride] / Oral-rat LD50: 2100 mg/kg [Sodium benzoate]
Skin corrosion/irritation: Data not available.
Serious eye damage/irritation: Data not available.
Respiratory or skin sensitization: Data not available.
Germ cell mutagenicity: Data not available.
Carcinogenity: IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity: Data not available.
STOT-single exposure: Data not available.
STOT-repeated exposure: Data not available.
Aspiration hazard: Data not available.
Potential health effects: Inhalation: May cause respiratory irritation. Ingestion: May be harmful if swallowed. Skin: Contact with skin may cause irritation. Eyes: Contact with eyes may cause irritation.
Signs and symptoms of exposure: To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards.

Additional information: RTECS #: SP5740000 [Methylene blue chloride] / DH6650000 [Sodium benzoate]

Section 12 Ecological Information

Toxicity to fish: Data not available.
Toxicity to daphnia and other aquatic invertebrates: Data not available.
Toxicity to algae: Data not available.
Persistence and degradability: Data not available.
Bioaccumulative potential: Data not available.
Mobility in soil: Data not available.
PBT and vPvB assessment: Data not available.
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: Not applicable
Shipping name: Not Regulated
Hazard class: Not applicable
Packing group: Not applicable
Reportable Quantity: No
Marine pollutant: No
2016 ERG Guide #: Not applicable

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>CERCLA (RQ)</th>
<th>RCRA code</th>
<th>DSL</th>
<th>NDSL</th>
<th>CA Prop 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene blue chloride</td>
<td>Listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Listed</td>
<td>Not listed</td>
<td>This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.</td>
</tr>
<tr>
<td>Sodium benzoate</td>
<td>Listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Listed</td>
<td></td>
</tr>
</tbody>
</table>

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

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