Section I - Product Identification

A solution of malachite green oxalate in water.

Section II - Hazards Identification

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

Safety Ratings

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

Recommended safety equipment: safety goggles, lab coat and proper gloves

Storage: General storage

NFPA Ratings

Health = 1  Flammability = 0  Reactivity = 0

Potential Health Effects

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

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>Malachite green oxalate</td>
<td>2437-29-8</td>
<td></td>
<td></td>
<td></td>
<td>0.1%</td>
</tr>
</tbody>
</table>

Section IV - First Aid Measures

Inhalation: 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.
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. In case of emergency, or when exposure levels are unknown, use a positive pressure, full face piece, air supplied respirator.
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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point</td>
<td>100 °C</td>
</tr>
<tr>
<td>Vapor pressure (mm Hg)</td>
<td>18 @ 20 °C</td>
</tr>
<tr>
<td>Vapor Density (air = 1)</td>
<td>0.6</td>
</tr>
<tr>
<td>Appearance and Odor</td>
<td>An opaque green liquid.</td>
</tr>
<tr>
<td>Density</td>
<td>About 1.00 g/ml</td>
</tr>
<tr>
<td>Evaporation Rate (water = 1)</td>
<td>1</td>
</tr>
<tr>
<td>Solubility</td>
<td>Infinitely miscible with water</td>
</tr>
</tbody>
</table>

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>NTP?</th>
<th>Anticipated?</th>
<th>IARC Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malachite green oxalate</td>
<td>no</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

Not normally restricted. Local governments may restrict the types of dyes that may be flushed down drain. Insure compliance with all government regulation.

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>malachite green oxalate</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>Malachite Green Oxalate</td>
<td>RQ No</td>
<td>TPQ No</td>
<td>261.33</td>
<td>8(D)</td>
</tr>
<tr>
<td>Chemical Weapons Convention:</td>
<td>No</td>
<td>TSCA 12(b): No</td>
<td>CDTA: No</td>
<td></td>
</tr>
<tr>
<td>SARA 311/312: Acute: Yes, Chronic: No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section XVI - Other Information

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

Revision Date: Jan. 3, 2018