Section I - Product Identification
An aqueous solution of aniline blue, phenol, lactic acid and glycerin.

Section II - Hazards Identification
Danger. Fatal if swallowed. Wash thoroughly after handling. Do not eat drink or smoke while using this product. If swallowed, immediately call a poison center and rinse mouth with water.

Safety Ratings

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

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

Storage: Room Temperature.

NFPA Ratings
Health = 2  Flammability = 0  Reactivity = 1

Potential Health Effects

Phenol is absorbed through intact skin and is highly toxic by ingestion, inhalation or contact. Gastrointestinal effects include: nausea, pain, bloody vomitus and diarrhea. Corrosive to skin and mucous membranes.

Inhalation: Phenol is absorbed through the mucous membranes and will produce irritation as well as the same effects as ingestion.

Ingestion: Inhalation will produce CNS disturbance, dizziness, photophobia, headache, stupor, coma and death. Phenol is very toxic.

Skin contact: Contact with phenol will cause chemical burns.

Eye contact: Even brief contact can cause irreversible eye damage.

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>Aniline blue</td>
<td>28631-66-5</td>
<td>----------</td>
<td>----------</td>
<td>--------------</td>
<td>---</td>
</tr>
<tr>
<td>Phenol</td>
<td>108-95-2</td>
<td>5 ppm (Skin) TWA</td>
<td>5 ppm (Skin) TWA</td>
<td>21% w/v</td>
<td></td>
</tr>
<tr>
<td>Lactic acid</td>
<td>50-21-5</td>
<td>----------</td>
<td>----------</td>
<td>--------------</td>
<td>---</td>
</tr>
<tr>
<td>Glycerin</td>
<td>56-81-5</td>
<td>5 mg/m³ (mist)</td>
<td>TWA 10 mg/m³</td>
<td>50% w/v</td>
<td></td>
</tr>
</tbody>
</table>

Section IV - First Aid Measures

Inhalation: Remove from source of exposure and get medical attention for any breathing difficulty.

Ingestion: Never give anything by mouth to a unconscious person. If the victim is conscious administer about 1 oz of castor oil or vegetable oil. Get immediate medical attention even if symptoms improve.

Skin Contact: In case of skin contact, remove contaminated clothing and flush with water. Wash affected area with soap and water. Get medical advice.

Eye Contact: In case of eye contact, flush with water for at least 15 minutes and get immediate medical attention.
Section V - Fire Fighting Measures

Flash point: Not applicable.
Flammable Limits: Not applicable.
Explosion: Not normally an explosion hazard.
Fire Extinguishing Media: Alcohol type foam, carbon dioxide or dry chemical.
Special information: Pyrolysis will release phenol and toxic oxides such as carbon monoxide.

Section VI - Accidental Release Measures

Remove all sources of ignition, absorb with a suitable absorbent (such as paper towels) and dispose.

Section VII - Handling and Storage

Store in a closed container at controlled room temperature. Store locked up.

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 recommended as part of good laboratory practice.
Eye Protection: Laboratory safety goggles or similar products are recommended as part of good laboratory practice.

Section IX - Physical and Chemical Properties

Boiling Point: 112 °C
Density: 1.16 g/ml
Vapor pressure (mm Hg): Unknown
Evaporation Rate (Water = 1): 1
Vapor Density (air = 1): 3.2
Solubility: Infinitely miscible with water
Appearance and Odor: A clear purple solution with the characteristic odor of phenol.

Section X - Stability and Reactivity

Stability: Freezes at very low temperature.
Hazardous Decomposition Products: Nothing unusual.
Hazardous polymerization: Will not occur.
Incompatibilities: Oxidizers.
Conditions to avoid: heat, flame and sources of ignition.

Section XI - Toxicological Information

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Known Carcinogenicity?</th>
<th>NTP?</th>
<th>Anticipated?</th>
<th>IARC Category</th>
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</thead>
<tbody>
<tr>
<td>Aniline blue</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>none</td>
</tr>
<tr>
<td>Phenol</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>3</td>
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<tr>
<td>Lactic Acid</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>none</td>
</tr>
<tr>
<td>Glycerine</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: Unknown, but expected to be toxic to aquatic organisms.
Phenol evaporates quickly and is not expected to bioaccumulate.

Section XIII - Disposal Considerations

Incineration at a licensed chemical disposal facility is the preferred disposal method. Local governments often restrict the amount of phenol that may be flushed down drain. Dispose of contents and container in accordance with all government regulations.
Section XIV - Transportation Information

DOT Shipping name: Phenol Solution  DOT Hazard Class: 6.1  Packing Group: II
Hazard Label: Poison  DOT Identification Number: UN2821

Section XV - Regulatory Information

Chemical Inventory Status

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>TSCA</th>
<th>EC</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Yes</td>
</tr>
<tr>
<td>Phenol</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Lactic Acid</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Glycerine</td>
<td>Yes</td>
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</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>
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<tbody>
<tr>
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<td>TPQ</td>
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<td>No</td>
</tr>
<tr>
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<td>No</td>
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<tr>
<td>Lactic Acid</td>
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<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Glycerine</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Chemical Weapons Convention: No  TSCA 12(b): No  CDTA: Yes
SARA 311/312: Acute: Yes, Chronic: Yes, Flammable: 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. 3, 2018