Section 1  Product Description

Product Name: Carosafe® Concentrate
Recommended Use: Science education applications
Synonyms: None
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2  Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

WARNING

Harmful if swallowed. Causes skin irritation. Causes serious eye irritation.

GHS Classification:
Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2A, Acute Toxicity - Oral Category 4

Section 3  Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene Glycol</td>
<td>57-55-6</td>
<td>91</td>
</tr>
<tr>
<td>2-Amino-2-Ethyl-1,3-Propanediol</td>
<td>115-70-8</td>
<td>6</td>
</tr>
<tr>
<td>2-Phenoxyethanol</td>
<td>122-99-6</td>
<td>3</td>
</tr>
</tbody>
</table>

Section 4  First Aid Measures

Emergency and First Aid Procedures

Inhalation: In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Skin Contact: IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
Ingestion: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Section 5  Firefighting Procedures

Extinguishing Media: Use dry chemical, CO2 or appropriate foam.

Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.

Fire and/or Explosion Hazards: Fire or excessive heat may produce hazardous decomposition products.

Hazardous Combustion Products: Carbon oxides, Nitrogen oxides

Section 6  Spill or Leak Procedures
Steps to Take in Case Material Is Released or Spilled: Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill. Ventilate the contaminated area. Isolate area. Keep unnecessary personnel away. Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Contain the discharged material. Use an inert absorbent such as sand or vermiculite. Place in properly labeled closed container. Do not flush spill to drain.

Section 7 Handling and Storage

Handling: Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe gas/fumes/vapor/spray. Avoid contact with skin and eyes. Avoid contact with clothing. Keep container tightly closed in a cool, well-ventilated place.

Storage: Keep container tightly closed in a cool, well-ventilated place. Material is hygroscopic (absorbs moisture).

Storage Code: Green - general chemical storage

Section 8 Protection Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH (TWA)</th>
<th>ACGIH (STEL)</th>
<th>OSHA PEL (TWA)</th>
<th>OSHA PEL (STEL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene Glycol</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>2-Amino-2-Ethyl-1,3-Propanediol</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>2-Phenoxyethanol</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Control Parameters

Engineering Measures: No exposure limits exist for the constituents of this product. Use local exhaust ventilation or other engineering controls to minimize exposures and maintain operator comfort.

Personal Protective Equipment (PPE):

Respiratory Protection: No respiratory protection required under normal conditions of use. Provide general room exhaust ventilation if symptoms of overexposure occur as explained Section 11. A respirator is not normally required.

Eye Protection: Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection: Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves: Natural rubber, Neoprene, PVC or equivalent., Nitrile

Section 9 Physical Data

Formula: See Section 3
Molecular Weight: N/A
Appearance: Colorless Liquid
Odor: Mild Sweet
Odor Threshold: No data available
pH: No data available
Melting Point: -60 C
Boiling Point: 152 - 153 C
Flash Point: 107 C
Flammable Limits in Air: (Propylene Glycol) LEL: 2.6% UEL: 12.6%
Vapor Pressure: N/A
Evaporation Rate (BuAc=1): N/A
Vapor Density (Air=1): N/A
Specific Gravity: >1
Solubility in Water: Soluble
Log Pow (calculated): 1.13 at 25 °C
Autoignition Temperature: 371 C
Decomposition Temperature: No data available
Viscosity: No data available
Percent Volatile by Volume: N/A

Section 10 Reactivity Data

Reactivity: No data available
Chemical Stability: Stable under normal conditions.
Conditions to Avoid: Sparks, open flame, other ignition sources, and elevated temperatures.
Safety Data Sheet

Incompatible Materials: Caustics (bases), Metals, Strong oxidizing agents
Hazardous Decomposition Products: Nitrogen oxides, Carbon oxides
Hazardous Polymerization: Will not occur

Section 11  Toxicity Data

Routes of Entry
Inhalation, ingestion, eye or skin contact.
Symptoms (Acute): N/A
Delayed Effects: No data available

Acute Toxicity:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene Glycol</td>
<td>57-55-6</td>
<td></td>
<td></td>
<td>Dermal LD50</td>
</tr>
<tr>
<td>2-Amino-2-Ethyl-1,3-Propanediol</td>
<td>115-70-8</td>
<td>Oral LD50</td>
<td>Rabbit 20800</td>
<td>Rabbit 5000 mg/kg</td>
</tr>
<tr>
<td>2-Phenoxyethanol</td>
<td>122-99-6</td>
<td>1260 mg/kg</td>
<td>Dermal LD50</td>
<td>Dermal LD50 Rat</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14422 mg/kg</td>
</tr>
</tbody>
</table>

Carcinogenicity:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene Glycol</td>
<td>57-55-6</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>2-Amino-2-Ethyl-1,3-Propanediol</td>
<td>115-70-8</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>2-Phenoxyethanol</td>
<td>122-99-6</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Chronic Effects:

<table>
<thead>
<tr>
<th>Mutagenicity</th>
<th>No evidence of a mutagenic effect.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teratogenicity</td>
<td>No evidence of a teratogenic effect (birth defect).</td>
</tr>
<tr>
<td>Sensitization</td>
<td>No evidence of a sensitization effect.</td>
</tr>
<tr>
<td>Reproductive</td>
<td>No evidence of negative reproductive effects.</td>
</tr>
</tbody>
</table>

Target Organ Effects:

Acute: See Section 2
Chronic: Not listed as a carcinogen by IARC, NTP or OSHA.

Section 12  Ecological Data

Overview: Slight ecological hazard. In high concentrations, this product may be dangerous to plants and/or wildlife. Keep out of waterways.
Mobility: This material is expected to have high mobility in soil. It absorbs weakly to most soil types.
Persistence: Biodegradation, Dissolved into water
Bioaccumulation: Bioconcentration is not expected to occur.
Degradability: Biodegrades at a moderate rate.
Other Adverse Effects: No data

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Eco Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene Glycol</td>
<td>57-55-6</td>
<td>96 HR LC50 PIMEPHALES PROMELAS 710 MG/L</td>
</tr>
<tr>
<td></td>
<td></td>
<td>96 HR LC50 PIMEPHALES PROMELAS 51400 MG/L [STATIC]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>96 HR LC50 ONCORHYNCHUS MYKISS 51600 MG/L [STATIC]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>48 HR EC50 DAPHNIA MAGNA &gt; 1000 MG/L [STATIC]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>24 HR EC50 DAPHNIA MAGNA &gt; 10000 MG/L</td>
</tr>
<tr>
<td></td>
<td></td>
<td>96 HR EC50 PSEUDOKIRCHNERIELLA SUBCAPITATA 19000 MG/L</td>
</tr>
<tr>
<td>2-Amino-2-Ethyl-1,3-Propanediol</td>
<td>115-70-8</td>
<td>Not available</td>
</tr>
<tr>
<td>2-Phenoxyethanol</td>
<td>122-99-6</td>
<td>96 HR LC50 PIMEPHALES PROMELAS 366 MG/L [STATIC]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>48 HR EC50 DAPHNIA MAGNA &gt; 500 MG/L</td>
</tr>
<tr>
<td></td>
<td></td>
<td>72 HR EC50 DESMODESMUS SUBSPICATUS &gt; 500 MG/L</td>
</tr>
</tbody>
</table>

Section 13  Disposal Information
Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.

Waste Disposal Code(s): Not Determined

### Section 14  Transport Information

**Ground - DOT Proper Shipping Name:** Not regulated for transport by DOT

**Air - IATA Proper Shipping Name:** Not regulated for air transport by IATA.

### Section 15  Regulatory Information

**TSCA Status:** All components in this product are on the TSCA Inventory.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>§ 313 Name</th>
<th>§ 304 RQ</th>
<th>CERCLA RQ</th>
<th>§ 302 TPQ</th>
<th>CAA 112(2) TQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene Glycol</td>
<td>57-55-6</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2-Amino-2-Ethyl-1,3-Propanediol</td>
<td>115-70-8</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2-Phenoxyethanol</td>
<td>122-99-6</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

### Section 16  Additional Information

**Revised:** 09/09/2015  
**Replaces:** 07/31/2015  
**Printed:** 10-29-2015

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

**Glossary**

- **ACGIH:** American Conference of Governmental Industrial Hygienists
- **CAS:** Chemical Abstract Service Number
- **CERCLA:** Comprehensive Environmental Response, Compensation, and Liability Act
- **DOT:** U.S. Department of Transportation
- **IARC:** International Agency for Research on Cancer
- **N/A:** Not Available
- **NTP:** National Toxicology Program
- **OSHA:** Occupational Safety and Health Administration
- **PEL:** Permissible Exposure Limit
- **ppm:** Parts per million
- **RCRA:** Resource Conservation and Recovery Act
- **SARA:** Superfund Amendments and Reauthorization Act
- **TLV:** Threshold Limit Value
- **TSCA:** Toxic Substances Control Act
- **TDS:** Not Available
- **PY:** Immediately dangerous to life and health