### Section 1. Chemical Product and Company Identification

**Common Name/Trade Name**
Propylene glycol

**Manufacturer**
SPECTRUM LABORATORY PRODUCTS INC.
14422 S. SAN PEDRO STREET
GARDENA, CA 90248

**Commercial Name(s)**
Not available.

**Synonym**
1,2-propanediol; 1,2-dihydroxypropane; 1,2-Propylene glycol; alpha-Propylene glycol; Methoxyethane glycol; Monopropylene glycol; Propane-1,2-Diol; (1)-Propene-1,2-diol

**Chemical Name**
Propylene Glycol

**Chemical Family**
Aromatic alcohol or glycol. (Solvent.)

**Chemical Formula**
CH₃CHOHCH₂OH

**Supplier**
SPECTRUM LABORATORY PRODUCTS INC.
14422 S. SAN PEDRO STREET
GARDENA, CA 90248

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### Section 2. Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>TWA (mg/m³)</th>
<th>STEL (mg/m³)</th>
<th>CEIL (mg/m³)</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Propylene glycol</td>
<td>57-55-6</td>
<td>10</td>
<td></td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

**Toxicological Data on Ingredients**

**Propylene glycol:**

- **ORAL (LD₅₀):**
  - Acute: 20000 mg/kg [Rat].
  - 20000 mg/kg [Mouse].
- **DERMAL (LD₅₀):**
  - Acute: 20800 mg/kg [Rabbit].

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### Section 3. Hazards Identification

**Potential Acute Health Effects**
Hazardous in case of skin contact (irritant). Slightly hazardous in case of skin contact (permeator), of eye contact (irritant), of ingestion. Non-hazardous in case of inhalation.

**Potential Chronic Health Effects**
Slightly hazardous in case of skin contact (sensitizer).

**CARCINOGENIC EFFECTS:** Not available.

**MUTAGENIC EFFECTS:** Not available.

**TERATOGENIC EFFECTS:** Not available.

**DEVELOPMENTAL TOXICITY:** Not available.

The substance may be toxic to central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.
**Section 4. First Aid Measures**

**Eye Contact**
Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention.

**Skin Contact**
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cool water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

**Serious Skin Contact**
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

**Inhalation**
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Serious Inhalation**
Not available.

**Ingestion**
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or wristband.

**Serious Ingestion**
Not available.

**Section 5. Fire and Explosion Data**

**Flammability of the Product**
May be combustible at high temperature.

**Auto-Ignition Temperature**
371°C (699.8°F)

**Flash Points**

**Flammable Limits**
LOWER: 2.6%  UPPER: 12.5%

**Products of Combustion**
These products are carbon oxides (CO, CO2).

**Fire Hazards in Presence of Various Substances**
Slightly flammable to flammable in presence of heat.

**Explosion Hazards in Presence of Various Substances**
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions**
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

**Special Remarks on Fire Hazards**
When heated to decomposition it emits acrid smoke and irritating fumes.

**Special Remarks on Explosion Hazards**
Not available.

**Section 6. Accidental Release Measures**

**Small Spill**
Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill**
Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

*Continued on Next Page*
Propylene glycol

Section 7. Handling and Storage

Precautions
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/tumes/vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, reducing agents, acids, alka’s, moisture.

Storage
Keep container tightly closed. Keep container in a cool, well-ventilated area. Hygroscopic.

Section 8. Exposure Controls/Personal Protection

Engineering Controls
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection
Splash goggles or Safety glasses. Lab coat or Synthetic apron. Because of the very low vapor pressure of Propylene Glycol, respiratory protection is not needed for normal handling of material and if room ventilation is adequate and if airborne concentrations do not exceed the exposure limits. Use of a vapor respirator is recommended when ventilation is inadequate and if handling of product creates mist or vapor (when product is misted or heated). Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection In Case of a Large Spill
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits
TWA: 10 (mg/m³) from AIHA
Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical state and appearance
Liquid. (Oily liquid)

Molecular Weight
76.1g/mole

pH (1% soln/water)
Not available.

Boiling Point
188°C (370.4°F)

Melting Point
-59°C (-74.2°F)

Critical Temperature
Not available.

Specific Gravity
1.03° (Water = 1)

Vapor Pressure
0 kPa (@ 20°C)
0.08 mmHg at 20°C
0.123 mmHg at 25°C

Vapor Density
2.62 (Air = 1)

Vulatility
Not available.

Odor Threshold
Not available.

Water/Oil Dist. Coeff.
The product is more soluble in water; log(oil/water) = -0.9

Ionicity (in Water)
Not available.

Dispersion Properties
See solubility in water, acetone.

Solubility
Soluble in cold water, hot water, acetone.

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### Section 10. Stability and Reactivity Data

<table>
<thead>
<tr>
<th>Stability</th>
<th>The product is stable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instability Temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Conditions of Instability</td>
<td>Incompatible materials, excess heat, exposure to moist air or water</td>
</tr>
<tr>
<td>Incompatibility with various substances</td>
<td>Reactive with oxidizing agents, reducing agents, acids, alkalis.</td>
</tr>
<tr>
<td>Corrosivity</td>
<td>Non-corrosive in presence of glass.</td>
</tr>
<tr>
<td>Special Remarks on Reactivity</td>
<td>Hygroscopic; keep container tightly closed. Incompatible with chloroformates, strong acids (nitric acid, hydrofluoric acid), caustics, aliphatic amines, isocyanates, strong oxidizers, acid anhydrides, silver nitrate, reducing agents.</td>
</tr>
<tr>
<td>Special Remarks on Corrosivity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Polymerization</td>
<td>Will not occur.</td>
</tr>
</tbody>
</table>

### Section 11. Toxicological Information

<table>
<thead>
<tr>
<th>Routes of Entry</th>
<th>Absorbed through skin. Eye contact.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity to Animals</td>
<td>Acute oral toxicity (LD50): 18500 mg/kg [Rabbit]. Acute dermal toxicity (LD50): 20800 mg/kg [Rabbit].</td>
</tr>
<tr>
<td>Chronic Effects on Humans</td>
<td>May cause damage to the following organs: central nervous system (CNS).</td>
</tr>
<tr>
<td>Other Toxic Effects on Humans</td>
<td>Hazardous in case of skin contact (irritant). Slighty hazardous in case of skin contact (perforator), of ingestion. Non-hazardous in case of inhalation.</td>
</tr>
<tr>
<td>Special Remarks on Toxicity to Animals</td>
<td>Lethal: Dose/Conc 50% Kill: LD50[Guinea Pig] - Route: Oral; Dose: 18350 - 19600 mg/kg LD50[Dog] - Route: Oral; Dose 19,000 - 22000 mg/kg LD50[Quail] - Route: Oral; Dose: &gt;2080 mg/kg</td>
</tr>
<tr>
<td>Special Remarks on Chronic Effects on Humans</td>
<td>May cause adverse reproductive effects and birth defects (teratogenic) based on animal test data.</td>
</tr>
<tr>
<td>Special Remarks on other Toxic Effects on Humans</td>
<td>Acute Potential Health Effects: Skin: Causes mild to moderate skin irritation. It may be absorbed through the skin and cause systemic effects similar to those of ingestion. Topical application to the skin (e.g. as a component of burn creams) has sometimes been associated with hyperosmolality, lactic acidosis, intravascular hemolysis, with complications of central nervous system depression, seizure, coma, hypoglycemia, and renal failure. Eyes: Causes mild eye irritation with some immediate, transient stinging, lacrimation, blepharospasm, and mild transient conjunctival hyperemia. There is no residual discomfort or injury once it is washed away. No corneal injury has been reported. Inhalation: Because of its low vapor pressure, Propylene Glycol is not considered an inhalation hazard for normal industrial handling. Inhalation of mist or vapor may cause respiratory tract irritation. Ingestion: Low acute toxicity. It may cause gastrointestinal tract irritation. It may affect behavior/central nervous system (CNS) depression, drowsiness, stupor, confusion, dysarthria, generalized anesthetic, convulsions, seizures, ataxia, tachy, somnolence, stupor, muscle contraction or spasticity, coma), brain changes in surface EEG, metabolism (lactic acidosis), blood (hemolysis, decrease in red blood cell count, changes in blood hemoglobin concentration, elevation in rectal temperature, leukocytosis, decreased neutrophil function), respiration (respiratory stimulation, chronic pulmonary edema, dyspnea, cyanosis), endocrine system (hypoglycemia), urinary system (kidneys), and liver. It may reduce intraocular pressure. Effects on the cardiovascular system (hypotension, bradycardia, arrhythmias, cardiac arrest) have been noted in cases with rapid intravenous injection. Chronic Potential Health Effects: Skin: Prolonged or repeated skin contact may cause defatting of skin, mild irritation, and allergic contact dermatitis. Ingestion: Prolonged or repeated ingestion may cause hyperglycemia and may affect behavior/CNS (stupor, seizures, and other symptoms similar to that of acute ingestion). Chronic ingestion of larger amounts may also cause lactic acidosis. Inhalation: Prolonged or repeated inhalation of mist or vapor may affect behavior/CNS (with symptoms similar to ingestion), and spleen. Medical Conditions Aggravated by Exposure: Kidney disease, impaired renal function. Lactic acidosis has been reported in individuals with renal impairment or failure.</td>
</tr>
</tbody>
</table>

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### Section 12. Ecological Information

**Ecotoxicity**
Ecotoxicity in water (LC50): >5000 mg/l 24 hours [Goldfish]. >10,000 mg/l 48 hours [guppy]. >10,000 mg/l 48 hours [water flea].

**BOD5 and COD**
Not available.

**Products of Biodegradation**
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation**
The products of degradation are less toxic than the product itself.

**Special Remarks on the Products of Biodegradation**
Not available.

### Section 13. Disposal Considerations

**Waste Disposal**
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

### Section 14. Transport Information

**DOT Classification**
Not a DOT controlled material (United States).

**Identification**
Not applicable.

**Special Provisions for Transport**
Not applicable.

**DOT (Pictograms)**

### Section 15. Other Regulatory Information and Pictograms

**Federal and State Regulations**
- Pennsylvania: RTK Propylene glycol
- Minnesota: Propylene glycol
- TSCA 8(b) inventory: Propylene glycol

**California Proposition 65 Warnings**
- California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.
- California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

**Other Regulations**
- EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 200-338-0).
- Canada: Listed on Canadian Domestic Substance List (DSL).
- China: Listed on National Inventory.
- Korea: Listed on National Inventory (KEDL).
- Philippines: Listed on National Inventory (PICCS).
- Australia: Listed on AICS.

**Other Classifications**

- **WHMIS (Canada)**
  - Not controlled under WHMIS (Canada).
- **DSCL (EEC)**
  - This product is not classified according to the EU regulations.
- **S24/25 - Avoid contact with skin and eyes.**

**HMIS (U.S.A.)**

- **Health Hazards:** 2
- **Fire Hazards:** 1
- **Reactivity:** 0
- **Personal Protection:** B

**National Fire Protection Association (U.S.A.)**

- **Health:** 0
- **Flammability:** 0
- **Reactivity:**
- **Specific Hazards:**
**Section 16. Other Information**

<table>
<thead>
<tr>
<th>MSDS Code</th>
<th>P4740</th>
</tr>
</thead>
</table>
| References | -Vendor MSDS  
-LOLI  
-RTECS  
-HSDB   |
| Other Special Considerations | Not available. |
| Validated by Sonia Owen on 8/18/2010. | Verified by Sonia Owen.  
Printed 8/18/2010. |

**CALL (310) 516-8000**

**Notice to Reader**

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.