

## MATERIAL SAFETY DATA SHEET

Material Name: **PROPYLENE GLYCOL**

|                                    |   |
|------------------------------------|---|
| Shipping Name                      | UN - not regulated for transport          |
| Transport of Dangerous Goods Class | not regulated for transport               |
| WHMIS Class                        | not regulated for transport               |
| Material Use                       | not controlled under WHMIS                |
|                                    | non-toxic antifreeze, food additive, inks |

| 1. HAZARDOUS INGREDIENTS           | CAS<br>NUMBER | %    | TWA/EV<br>(ppm) | LD <sub>50</sub><br>ORAL | (mg/kg)<br>SKIN | LC <sub>50</sub> ppm<br>INHALATION |
|------------------------------------|---------------|------|-----------------|--------------------------|-----------------|------------------------------------|
| Propylene Glycol (1,2-Propanediol) | 57-55-6       | 100% | not listed      | 18,300                   | 21,000          | no data                            |

### 2. PHYSICAL CHARACTERISTICS

|                          |   |
|--------------------------|---|
| Odour & Appearance       | clear, colourless, odourless, viscous, hygroscopic liquid |
| Odour Threshold          | none - odourless  |
| Vapour Pressure          | 0.07 mmHg / 0.009 kPa (20°C)                              |
| Vapour Density (air = 1) | 2.6   |
| Boiling Point            | 188°C   |
| Freezing Point           | -60°C   |
| Specific Gravity         | 1.038   |
| Water Solubility         | complete; also soluble in alcohols, ketones & ethers      |

### 3. FLAMMABILITY & REACTIVITY

|                                  |   |
|----------------------------------|---|
| Flash Point                      | 99°C (closed cup)   |
| Auto Ignition Temperature        | 371°C (can burn if strongly heated)                             |
| Flammable Limits                 | 2.6% - 12.5%  |
| Hazardous Combustion Products    | carbon monoxide, nitrogen oxides                                |
| Firefighting Precautions         | alcohol-type foam, dry chemical, water fog, water spray to cool |
| below flash point,               | water jet may spread flames; firefighters must wear SCBA        |
| Sensitivity to Static Discharge  | not sensitive   |
| Sensitivity to Mechanical Impact | not sensitive   |
| Chemical Stability               | stable; will not polymerize                                     |
| Reactive With                    | strong oxidizing agents   |
| Dangerous Decomposition Products | none apart from "Hazardous Combustion Products"                 |

### 4. TOXICOLOGY: EFFECTS OF ACUTE EXPOSURE

|                 |  |
|-----------------|--|
| Skin Contact    | virtually without effect ( <i>irritation has been reported in 16% of 866 dermatitis patients</i> ) |
| Skin Absorption | slight; no toxic effect anticipated by this route  |
| Eye Contact     | mildly irritating  |
| Inhalation      | vapour or mist is apparently without effect (10% vapour apparently harmless to Humans)             |
| Ingestion       | little or no effect; at lethal dose, convulsions and pulmonary oedema may occur                    |

**(Propylene Glycol, cont'd)****EFFECTS OF CHRONIC EXPOSURE**

|                            |   |
|----------------------------|---|
| General                    | concentrated water solutions, held against the skin, are reported to irritate |
| Sensitizing                | no  |
| Carcinogenic               | no  |
| Reproductive Effect        | none known in humans  |
| Synergistic With           | not known   |
| Estimated LD <sub>50</sub> | 18,300 mg/kg (oral, guinea pig); 21,000 mg/kg (skin, rabbit)                  |
| Estimated LC <sub>50</sub> | no data   |

**5. PROTECTIVE EQUIPMENT**

|            |                                  |
|------------|----------------------------------|
| Hands      | not required                     |
| Eyes       | safety glasses with side shields |
| Respirator | not required                     |
| Clothing   | not required                     |

**6. ENVIRONMENT**

|                 |  |
|-----------------|--|
| Leak Precaution | dyke to control spillage and prevent environmental contamination   |
| Handling Spill  | recovers free liquid with suitable pumps; absorb residue on a suitable sorbent and store for disposal  |
| Waste Disposal  | <b>do not flush to sewer;</b> the concentrated liquid can kill marine flora and Fauna; may be incinerated in approved facility with flue gas scrubbing |

**7. STORAGE & HANDLING**

Store and use in a cool dry environment, away from sources of ignition, heat and oxidizing agents. Do not cut, drill, weld or grind on or near this container. Avoid prolonged contact with skin and wash work clothes frequently. An eye bath and safety shower should be available near the workplace.

**8. FIRST AID**

|             |   |
|-------------|---|
| SKIN:       | Wash with soap and plenty of water. Remove contaminated clothing and do not reuse until thoroughly cleaned or laundered.  |
| EYES:       | Wash eyes with plenty of water, holding eyelids open. Seek medical assistance promptly if there is any irritation.  |
| INHALATION: | Remove from contaminated area promptly. <b>CAUTION: Rescuer must not endanger Himself!</b> If breathing stops, administer artificial respiration and seek medical aid promptly.   |
| INGESTION:  | Give plenty of water to dilute product. Do not induce vomiting (see below). Keep victim quiet. If vomiting occurs, keep victim's head below the hips to prevent inhalation of vomited material. Seek medical help promptly. |

NOTE: Inadvertent inhalation of vomited material may seriously damage the lungs. The risk and danger of this is greater than the risk of poisoning through absorption of this product. The stomach should be emptied under medical supervision, after the installation of an airway to protect the lungs.

|   |                                       |
|---|---------------------------------------|
| Emergency telephone numbers - weekdays from 8:00 - 5:00 | (705) 436-5580                        |
| at all other times                                      | (800) 567-7455 (Philip Environmental) |

*\*\*\*The information contained herein is accurate to the best of our knowledge. Filter Innovations Inc. makes no warranty with respect hereto said information and disclaims all liability from reliance there in \*\*\**