MATERIAL SAFETY DATA SHEET

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_____ SECTION 1 _____ Product Name: PROPYLENE GLYCOL INDUSTRIAL Supplier's Name: APCO INDUSTRIES CO. LTD. 10 Industrial Street Toronto, Ontario M4G 1Z1 Information Telephone: 416-421-6161 Prepared by M.C. Needham Date: April 1, 2015 _____ SECTION 2 - TOXICOLOGICAL DATA _____ Propylene Glycol 100% CAS NO. 000057-55-6 LD50 Rat Oral 21-33.7 g/Kg. LD50 Dermal Rabbit 20.8 g/Kg. Not controlled product under WHMIS Regulations. SECTION 3 - PHYSICAL/CHEMICAL PROPERTIES _____ Appearance: Colorless liquid Odour: Odourless Boiling Point: 370 Deg. F, 188 Deg. C Vapour Pressure: 0.08 mmHg @ 20 Deg. C Vapour Density (Air = 1): 2.62 Solubility in Water: Complete Specific Gravity: 1.038 @ 20 Deg.C (68 Deg.F) _____ SECTION 4 - FIRE AND EXPLOSION HAZARD _____ Flash Point: 214 Deg. F, 101 Deg. C Method Used: TCC Flammable Limits (% in air): LFL: 2.35% UFL: 13.7%

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Extinguishing Media: Water fog, Alcohol Foam, CO2, Dry Chemical. Fire & Explosion Hazards: Not available. Fire-Fighting Equipment: Wear positive-pressure, selfcontained breathing apparatus. Hazardous Decomposition Products: Propionaldehyde, carbon monoxide in the presence of limited oxygen in a fire situation.

SECTION 5 - REACTIVITY DATA

Stability: Stable under normal storage conditions. Incompatibility: (Specific Materials to Avoid) Oxidizing material.

Hazardous Polymerization: Will not occur.

SECTION 6 - HEALTH HAZARD DATA

- Eye Contact: May cause slight transient (temporary) eye irritation. Corneal injury is unlikely.
- Skin Contact: Prolonged contact is essentially nonirritating to skin. Repeated exposure may cause slight flaking, tenderness, and softening of skin.
- Skin Absorption: A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. The LD50 for skin absorption in rabbits is >10 g/kg.
- Ingestion: Single dose oral toxicity is low. The oral LD50
 for rats is 21-33.7 g/kg.* No hazards anticipated from
 ingestion incidental to industrial exposure.
- Inhalation: A single prolonged (hours) inhalation exposure
 is not likely to cause adverse effects. Mists are not
 likely to be hazardous.
- Systemic & Other Effects: Repeated excessive ingestion may cause central nervous system effects. Did not cause cancer in long-term animal studies. Birth defects are unlikely. Exposures having no adverse effects on the mother should have no effect on the fetus. In animal studies, has been shown not to interfere with reproduction. Results of in vitro ("test tube") mutagenicity tests have been negative. Results of mutagenicity tests in animals have been negative.

*Dow Chemical Co.

_____ SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE _____ Exposure Guideline(sS): Dow Industrial Hygiene Guide is 10mg/m3 mist, 400 ppm vapor. Ventilation: Good general ventilation should be sufficient. Respiratory Protection: When airborne exposure guidelines and/or comfort levels may be exceeded, use an approved air-purifying respirator. Skin Protection: Use impervious gloves when prolonged or frequently repeated contact could occur. Eye Protection: Use safety glasses. Where contact with liquids is likely, chemical goggles are recommended because eye contact with this material may cause pain, even though it is unlikely to cause injury. Action to take for Spills/Leaks: Small spills: Cover with absorbent material, soak up and sweep into a drum. Large spills: Dike around spill and pump into suitable containers. Disposal Method: Reprocess or burn in an approved incinerator in accordance with all federal, state, and local requirements. _____ SECTION 8 - EMERGENCY FIRST AID PROCEDURES _____ Eye: Irrigate immediately with water for at least 5 minutes. Skin: Wash off in flowing water or shower. Inhalation: No adverse effects anticipated by this route of exposure incidental to proper industrial handling. Ingestion: No adverse effects anticipated by this route of exposure. Note to Physician: No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient. _____ The information provided in this Material Safety Data Sheet has been obtained from sources believed to be reliable. Apco Industries Co. Ltd. provides no warranties express or implied and assumes no responsibility for the accuracy or the

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