

PROPYLENE GLYCOL 50/50

SAFETY DATA SHEET

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Propylene Glycol – 50/50
General or Generic ID:	Propane 1,2-diol; 1,2-dihydroxypropane; methyl-ethylene glycol; mono-propylene glycol.
Manufacturer's Name (same as Supplier):	Inland Technologies International Ltd. P.O. Box 253, 14 Queen Street Truro, Nova Scotia B2N 5C1 Canada Phone: (877) 633-5263
Technical Contact:	amcleod@inlandgroup.ca
Marketing Contact:	bpace@inlandgroup.ca
Recommended Use:	De-icing/Anti-icing applications, antifreeze agents, mining chemicals.
Restricted Use:	There are no uses advised against.
Emergency Telephone:	PERS: (800) 633-8253

SECTION 2. HAZARDS IDENTIFICATION

Hazard Classification:

Health Hazards:	<i>Health:</i>	0
	<i>Flammability:</i>	1
	<i>Physical Hazard:</i>	0

Hazard Statement: This material is NOT HAZARDOUS by OSHA Hazard Communication definition. Propylene Glycol is a slightly combustible liquid. Do not handle near heat, sparks or open flame. May cause eye irritation. High aerosol concentrations may cause mild irritation of the nose and throat as well as central nervous system depression. Not expected to cause skin irritation. Not expected to be a sensitizer.

Other Hazards Which Do Not Result in GHS Classification: None

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Identity:</u>	<u>Common Name and Synonyms:</u>	<u>CAS Number:</u>	<u>Content in Percent (%):</u>
Propylene Glycol	Glycol, 1,2-propandiol	57-55-6	50%–55%
Hydrogen Oxide	H ₂ O, Water	7732-18-5	Balance

SECTION 4. FIRST AID MEASURES

General Information: Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in advance.

SECTION 4. FIRST AID MEASURES

Ingestion:	Call a physician or poison control center immediately. Do not induce vomiting without advice from poison control center. Never give liquid to an unconscious person. If vomiting occurs, keep head low so that stomach content doesn't get into lungs.
Inhalation:	Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.
Skin Contact:	Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing.
Eye Contact:	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

Most Important Symptoms/Effects, Acute and Delayed:

Symptoms: May irritate eyes. Harmful if swallowed.

Indication of Immediate Medical Attention and Special Treatment Needed:

Treatment: Treat symptomatically. Symptoms may be delayed.

SECTION 5. FIRE FIGHTING MEASURES

General Fire Hazards:	In case of fire and/or explosion, do not breathe fumes.
Extinguishing Media:	<i>Suitable Extinguishing Media:</i> Water spray, foam, dry powder or carbon dioxide. <i>Unsuitable Extinguishing Media:</i> Direct water spray will spread fire.
Special Hazards Arising from the Substance or Mixture:	Fire may produce irritating, corrosive and/or toxic gases.
Special Protective Equipment and Precautions for Firefighters:	<i>Special Firefighting Procedures:</i> Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out. <i>Special Protective Equipment for Firefighters:</i> Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:	Use personal protective equipment. Keep unauthorized personnel away. Keep up-wind. Ventilate closed spaces before entering them.
Methods and Material for Containment and Cleaning:	Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.
Notification Procedures:	Dike for later disposal. Prevent entry into waterways, sewers, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.
Environmental Precautions:	Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, watercourses or onto the ground.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling:	Use personal protective equipment as required. Do not breathe mist or vapor. Avoid contact with eyes, skin and clothing. Do not taste or swallow. Wash hands thoroughly after handling. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.
Conditions for Safe Storage (including any incompatibilities):	Keep container tightly closed. Store in well-ventilated place. Store in a dry place. Store in a locked or controlled access area.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters:

Occupational Exposure Limits:

<u>Chemical Identity:</u>	<u>Type:</u>	<u>Exposure Limit Values:</u>	<u>Source:</u>
Propylene Glycol	Ceiling	50 PPM 125 mg/m ³	US. OSHA VPEL
Propylene Glycol – Aerosol	Ceiling	100 mg/m ³	ACGIH TLV

Engineering Controls: Maintain sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLVs.

Individual Protection Measures, Such as Personal Protective Equipment:

General Information:	Good general ventilation (typically 10 air exchanges per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.
Respiratory Protection:	In case of inadequate ventilation use suitable respirator. Chemical respirator with organic vapor cartridge, full facepiece, dust and mist filter.
Eye/Face Protection:	Wear safety glasses with side shields (or goggles).
Skin Protection:	Hand: Chemical resistant gloves. Other: Wear suitable protective clothing
Hygiene Measures:	Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Avoid contact with eyes, skin and clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Physical State: Liquid Form: Liquid Colour: Clear (colourless)
Odour:	Odourless
Odour Threshold:	No data available.
pH:	6–8
Melting Point/Freezing Point:	-60 °C (-76 °F)
Initial Boiling Point and Boiling Range:	>187 °C (>368 °F)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Flash Point:	>100 °C (>212 °F) – Closed Cup
Evaporation Rate:	0.01
Flammability (solid/gas):	No data available.
Upper/Lower Limit on Flammability or Explosive Limits:	<i>Flammability Limit</i> – upper (%): 12.6 %(V) <i>Flammability Limit</i> – lower (%): 2.6 %(V) <i>Explosive Limit</i> – upper (%): No data available. <i>Explosive Limit</i> – lower (%): No data available.
Vapor Pressure:	0.13 mmHg @ 20 °C
Vapor Density (AIR = 1):	2.62
Relative Density:	1.03 (20°C)
Solubility:	<i>Solubility in Water:</i> Miscible with water. <i>Solubility (other):</i> No data available.
Partition Coefficient (n-octanol/water):	No data available.
Auto-ignition Temperature:	400 °C (752 °F)
Decomposition Temperature:	No data available.
Viscosity (20 °C):	45 mPa.s
Other Information:	<i>Minimum Ignition Temperature:</i> 400 °C (752 °F) <i>Molecular Weight:</i> 76.10 g/mol (C ₃ H ₈ O ₂)

SECTION 10. STABILITY AND REACTIVITY

Reactivity:	No dangerous reactions known under conditions of normal use.
Chemical Stability:	Hygroscopic
Possibility of Hazardous Reactions:	Hazardous polymerization does not occur.
Conditions to Avoid:	Excessive heat. Contact with incompatible materials. Exposure to moist air or water.
Incompatible Materials:	Strong oxidizing agents. Acids.
Hazardous Decomposition Products:	Thermal decomposition may release oxides of carbon.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure:

Ingestion:	Harmful if swallowed.
Inhalation:	Spray mist may irritate the respiratory system.
Skin Contact:	May cause irritation.
Eye Contact:	Causes serious eye irritation.

Information on Toxicological Effects:

Acute Toxicity:

SECTION 11. TOXICOLOGICAL INFORMATION

Oral LD₅₀ mg/kg	Dermal LD₅₀ mg/kg	Inhalation LD₅₀ mg/L/4hr
2,000, Rat	20,800, Rabbit	No data available.
Skin Corrosion/Irritation:	Defatting, drying and cracking of skin.	
Serious Eye Damage/Eye Irritation:	May irritate eyes.	
Respiratory or Skin Sensitization:	Not a skin sensitizer.	
Carcinogenicity:	This substance has no evidence of carcinogenic properties.	
Germ Cell Mutagenicity:	<i>In Vitro:</i> No mutagenic components identified. <i>In Vivo:</i> No mutagenic components identified.	
Reproductive Toxicity:	May damage fertility or the unborn child.	
Specific Target Organ Toxicity (single exposure):	Central nervous system, kidneys.	
Specific Target Organ Toxicity (repeated exposure):	Kidney, spleen, blood.	
Aspiration Hazard:	Not classified.	
Other Effects:	None known.	

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity:

Acute Hazards to the Aquatic Environment – Propylene Glycol

Fish:	LC ₅₀ (Bluegill), 96 h: 51,400 mg/L Mortality LC ₅₀ (Fathead Minnow), 96 h: 51,600 mg/L Mortality
Aquatic Invertebrates:	EC ₅₀ (Water Flea), 48 h: 1,000 mg/L

Chronic Hazards to the Aquatic Environment:

Fish:	No data available.
Aquatic Invertebrates:	No data available.
Toxicity to Aquatic Plants:	No data available.

Persistence and Degradability:

Biodegradation:	This product is biodegradable.
BOD/COD Ratio:	No data available.
Mobility in Soil:	The product is water soluble and may spread in water systems.
Other Adverse Effects:	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13. DISPOSAL CONSIDERATION

Disposal Instructions: Discharge, treatment, or disposal may be subject to national, state, or local laws.
Contaminated Packaging: Since emptied containers retain product residue, follow label warnings even after container is emptied.

SECTION 14. TRANSPORT INFORMATION

Canadian Transportation of Dangerous Goods Act: Not regulated.
US DOT: Not regulated.
IMDG: Not regulated.
IATA: Not regulated.

SECTION 15. REGULATORY INFORMATION

Canadian Regulations:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by those regulations.

WHMIS Classification – Propylene Glycol: D2B – Poisonous/Infectious material
 – Immediate/Serious effects
 – Toxic

United States Federal Regulations:

Toxic Substance Control Act (TSCA) Status: The intentional ingredients of this product are listed.
CERCLA RQ – 40 CFR 302.4(a): Not Applicable.
CERCLA RQ – 40 CFR 302.4(b): Not Applicable.
SARA 313 Components – 40 CFR 355 Appendix A: None
Section 311/312 Hazard Class – 40 CFR 370.2: *Fire:* No
Pressure Generating: No
Reactive: No
Immediate (Acute): Yes
Delayed (Chronic): Yes

SARA 313 Components – 40 CFR 372.65:

Section 313 Component(s):	CAS Number:	Percent (%):
Propylene Glycol	57-55-6	50%–55%
Hydrogen Oxide	7732-18-5	Balance

State and Local Regulations:

California Proposition 65: None
New Jersey RTK Label Information: 1,2-Propylene Glycol – 57-55-6
Pennsylvania RTK Label Information: 1,2-Propylene Glycol – 57-55-6
Massachusetts RTK Label Information: 1,2-Propylene Glycol – 57-55-6

International Regulations:

Inventory Status: Not determined.

SECTION 16. OTHER INFORMATION

The information accumulated herein is believed to be accurate, but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

Acronyms:

ACGIH	American Conference of Governmental Industrial Hygienists
IARC	International Agency for Research on Cancer
LEL	Lower Explosive Limit
mg/m ³	Milligrams per Cubic Meter
N/A	Not Applicable
NTP	National Toxicology Program
°C	Degree Celsius
°F	Degree Fahrenheit
OSHA	Occupational Safety and Health Administration
PEL	OSHA Permissible Exposure Limit
ppm	Parts Per Million
STEL	Short Term Exposure Limit
TLV	ACGIH Threshold Limit Value
TWA	Time Weighted Average
UEL	Upper Explosive Limit
UN	United Nations

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