Safety Data Sheet

Dynafrost

1. IDENTIFICATION

Product Identifier: Dynafrost
Canadian TDG: Non regulated
Synonyms: None
Chemical Family: Glycols
Recommended Use: Heat transfer
Restrictions on Use: None

Manufacturer / Supplier:
Genesis Chemicals
1451 Highway Ave SE
Redcliff, AB
T0J 2P0

Prepared by: The Environmental, Health and Safety Department of Genesis Chemicals Ltd
Preparation Date of SDS: February 13, 2017
Telephone number of preparer: 403-528-4220

24-Hour Emergency Telephone Number (CANUTEC): (613) 996-6666

2. HAZARDS IDENTIFICATION

GHS Classification
This chemical does not meet the hazardous criteria set forth by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). However, this Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.

GHS Label element
Not a hazardous substance or mixture.

Signal Word: Not Applicable

Hazard Statements(s): Not Applicable

Precautionary Statement(s): Not Applicable

Other Hazards: None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration %
Propylene Glycol	57-55-6	50 – 100

Proprietary Component, Trade Secret	XXX-XX-XX	3 – 7

Notes
If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First-aid Measures
Inhalation
Remove victim to fresh air and keep at rest in a position comfortable for breathing. If effects occur consult a physician.
Skin Contact
Flush with copious amounts of water as a precaution. If skin irritation or a rash occurs, get medical advice/attention.
Eye Contact
Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Remove contact lenses, if present and easy to do. If eye irritation persists, get medical advice/attention.
Ingestion
Wash out mouth with water. Remove dentures if any. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe.

Most Important Symptoms and Effects, Acute and Delayed
None known.

Immediate Medical Attention and Special Treatment
Special Instructions
Treat symptomatically and supportively.

5. FIRE-FIGHTING MEASURES

Extinguishing Media
Suitable Extinguishing Media
Water spray, carbon dioxide, dry chemical powder or appropriate foam.
Unsuitable Extinguishing Media
Do not use direct water stream. May spread fire.

Specific Hazards Arising from the Chemical
Exposure to combustion products may be a hazard to health.

Special Protective Equipment and Precautions for Fire-fighters
Evacuate area. Approach fire from upwind to avoid hazardous vapours or gases.
Before entry, especially into confined areas, use an appropriate monitor to check for: toxic gases or vapours, flammable or explosive atmosphere.
Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn. If there is potential for skin contact with concentrated cleaner: chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary. See Skin Protection in Section 8 (Exposure Controls/Personal Protection) for advice on suitable chemical protective materials.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures
Follow safe handling advice and personal protective equipment recommendations.

Environmental Precautions
Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

Methods and Materials for Containment and Cleaning Up
Soak up with inert absorbent material. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

Other Information
Report spills to local health, safety and environmental authorities, as required.

7. HANDLING AND STORAGE

Precautions for Safe Handling
When handling diluted product: no special handling precautions are necessary. Use only with adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Take care to prevent spills, waste and minimize release to the environment.

Conditions for Safe Storage
Keep in properly labeled containers. Store in accordance with the particular national regulations. Store separate from incompatible materials (see Section 10: Stability and Reactivity).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Ingredients	ACGIH® TLV®	OSHA PEL	IDLH
Propylene Glycol	Not available	Not available	Not available
Proprietary Component, Trade Secret	Not available	Not available	Not available

Consult local authorities for provincial or state exposure limits.

Appropriate Engineering Controls
General ventilation is usually adequate. Provide eyewash and safety shower if contact or splash hazard exists.
When handling large quantities of concentrated product: use a local exhaust ventilation and enclosure, if necessary, to control amount in the air.

Individual Protection Measures
Eye/Face Protection
Do not get in eyes. Wear chemical safety goggles.
Skin Protection
Skin should be washed after contact.
Other Personal Protection Data: Ensure that eyewash stations and safety showers are proximal to the work-station location. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

9. CHEMICAL AND PHYSICAL PROPERTIES

Basic Physical and Chemical Properties
Appearance Clear colourless liquid

Odour	Odorless
Odour Threshold	Not available
pH	Not applicable
Melting Point/Freezing Point	<-20°C / -4°F
Initial Boiling Point/Range	>165.0ºC / 329.0°F @ 760 mmHg
Flash Point	>100ºC (estimated)
Evaporation Rate	0.01 (estimated)
Flammability (solid, gas)	Not applicable (liquid).
Upper/Lower Flammability or	Not available
Explosive Limit	2.6% vol. (lower) 12.5% vol. (upper)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	1.05 at 20°C
Solubility	Soluble in water
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity (dynamic)	Not available
Other Information	
Physical State:	Liquid

10. STABILITY AND REACTIVITY

Reactivity
Not reactive. Not sensitive to mechanical impact.

Chemical Stability
Normally stable.

Possibility of Hazardous Reactions
None expected under normal conditions of storage and use.

Conditions to Avoid
None known.

Incompatible Materials
Oxidizing agents (e.g. peroxides)

Hazardous Decomposition Products
No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure Inhalation; skin contact; eye contact; ingestion.

Ingredients	LD50s and LC50s Route & Species
Propylene Glycol	Oral LD50 Rat = 20000 mg/kg Dermal LD50 Rabbit = 20800 mg/kg
Proprietary Component, Trade Secret	Not available

Potential Health Effects

Eyes:	May cause slight temporary eye irritation.
Skin:	Health injuries are not known or expected under normal use.
Ingestion:	Health injuries are not known or expected under normal use.
Inhalation:	Health injuries are not known or expected under normal use.
Chronic Exposure:	Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Experience with Human Exposure

Eye contact:	Redness, irritation.
Skin contact:	No symptoms known or expected.
Ingestion:	No symptoms known or expected.
Inhalation:	No symptoms known or expected.

Toxicity

Acute oral toxicity:	Acute toxicity estimate (ATE): > 20,000 mg/kg
Acute inhalation toxicity:	No data available
Acute dermal toxicity:	Acute toxicity estimate (ATE): > 20,000 mg/kg

STOT (Specific Target Organ Toxicity) - Single Exposure Inhalation
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Aspiration Hazard
Not an aspiration hazard.

STOT (Specific Target Organ Toxicity) - Repeated Exposure
In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

Skin Corrosion/Irritation
Prolonged skin contact may cause temporary irritation.

Serious Eye Damage/Eye Irritation
May cause slight temporary eye irritation.
Corneal injury is unlikely.
Mist may cause eye irritation.

Respiratory or Skin Sensitization
This product is not expected to cause respiratory or skin sensitization.

Carcinogenicity
This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA**.**

Reproductive Toxicity
This product is not expected to cause reproductive or developmental effects.

Germ Cell Mutagenicity
No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Interactive Effects
No information was located.

Additional Information:

12. ECOLOGICAL INFORMATION

This section is not required by WHMIS.
This section is not required by OSHA.

13. DISPOSAL CONSIDERATIONS

Disposal Methods
Recommended disposal methods are for the product, as sold. (Used material may contain other hazardous

contaminants). The required hazard evaluation of the waste and compliance with the applicable hazardous waste laws are the responsibility of the user.

Disposal methods: Diluted product can be flushed to sanitary sewer.

Disposal considerations: Dispose of in accordance with local, state, and federal regulations.

14. TRANSPORT INFORMATION

DOT (U.S.):
DOT Shipping Name: Not Regulated.
DOT Hazardous Class Not Applicable.
DOT UN Number: Not Applicable.
DOT Packing Group: Not Applicable.
DOT Reportable Quantity (lbs): Not Available.
Marine Pollutant: No.

TDG (Canada):
TDG Shipping Name: Not Regulated.
Hazard Class: Not Applicable.
UN Number: Not Applicable.
Packing Group: Not Applicable.
Marine Pollutant: No.

Special Precautions for User
Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

15. REGULATORY INFORMATION

U.S. TSCA Inventory Status: All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

Canadian DSL Inventory Status: All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

California Proposition 65: Not Listed.
MA Right to Know List: Listed.
New Jersey Right-to-Know List: Listed.
Pennsylvania Right to Know List: Listed.

WHMIS Hazardous Class:
NON-CONTROLLED

16. OTHER INFORMATION

Additional Information:	This product has been classified in accordance with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) and the SDS contains all the information required by the Hazardous Products Regulations (HPR).
Prepared by:	The Environmental, Health and Safety Department of Genesis Chemicals Ltd

Date of Latest Revision: October 21, 2020

Key to Abbreviations: IARC = International Agency for Research on Cancer. Group 3 = Not classifiable as to its carcinogenicity to humans. ACGIH® = American Conference of Governmental Industrial Hygienists. A4 = Not classifiable as a human carcinogen. NTP = National Toxicology Program. OSHA = US Occupational Safety and Health Administration. ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value. TWA = Time-Weighted Average. STEL = Short-term Exposure Limit. A4 = Not classifiable as a human carcinogen. OSHA = US Occupational Safety and Health Administration. PEL = Permissible Exposure Limits. IDLH = Immediately Dangerous to Life and Health.

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*****END OF SDS*****