Houghton Chemical Corporation

Safety Data Sheet

GREEN MOUNTAIN® Non-Toxic Antifreeze

Section 1 - Identification	
Manufacturer Address	Houghton Chemical Corporation 52 Cambridge Street, Allston, MA 02134 1-617-254-1010 or 1-800-777-2466
Emergency Telephone	**CHEMTREC: 1-800-424-9300**
Chemical Name & Synonyms	Antifreeze/Inhibited Propylene Glycol
Chemical Family	Propylene Glycol Mixture
Recommended Use	Automotive Antifreeze
Restrictions on Use	Dilution to 50% is generally recommended: dilute to meet local condition.
Section 2 – Hazard(s) Identification	
Hazard Classification	Sensitization – Skin: Category 1 Toxic to Reproduction: Category 2
Signal Word	Warning
Hazard Statement	May cause an allergic skin reaction. Suspected of damaging fertility of the unborn child.
Pictogram Description	Health Hazard, Exclamation Point
Precautionary Statement	Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing fumes, vapors, mist, or sprays. Contaminated work clothing must not be allowed out of the workplace. Wear eye & face protection and protective gloves & clothing. Response: If on skin: Wash with soap and plenty of water. If skin irritation or rash occurs: Get medical attention. Wash contaminated clothing before reuse. If exposed or concerned: Get medical advice. Storage: Store locked up. Disposal: Contact local sewer, municipal, state and/or federal agencies to determine appropriate disposal options for the product. Dispose of this container with a registered reconditioner or as otherwise appropriate.
Any other Hazard not otherwise classified	Not Applicable

Section 3 – Composition and Information on Ingredients			
Chemical Name	Common name and synonyms	CAS #	% by weight
Propylene Glycol	1,2 - Propanediol	57-55-6	96%
Water	N/A	7732-18-5	2%
Inhibitors & Dye	N/A	Proprietary	2%

Section 4 – First aid Measures	
Symptoms of Exposure	
Acute	Irritation of affected area
Delayed	Irritation
Inhalation	Vapors and mists expected to be slightly irritating to upper respiratory tract.
Skin	Irritation may result
Eye Contact	Irritation may cause transitory stinging and tearing.
Ingestion	Very low toxicity if ingested. Ingestion of larger amounts may cause gastrointestinal upset.
First Aid Instructions	
Inhalation	Remove to fresh air. If symptoms persist, seek medical attention.

Skin	Wash skin with soap and water. Remove any contaminated clothing. Seek medical attention if irritations develops or persists.
Eye Contact	Flush with water for at least 20 minutes. After 2-5 minutes of flushing, remove contact lenses (if worn).Seek medical attention if irritations develops or persists.
Ingestion	DO NOT induce vomiting, seek medical attention.
Other	Not Applicable

Section 5 – Fire Fighting Measures

Suitable Extinguishing Material	**Water, water fog, water spray, alcohol-resistant foam, dry chemical, sand, or carbon dioxide.**
Unsuitable Extinguishing Material	No Data Available
Hazards from Combustion	Smoke may contain the original material in addition to but not limited to: Carbon Monoxide, Carbon Dioxide.
Special Protective Equipment for Firefighters	Wear self-contained breathing apparatus and protective suit. Evacuate personnel to safe areas and keep upwind of fire.

Section 6 – Accidental Release Measures

Use of personal precautions	Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment.
Protective equipment to prevent the contamination of skin, eyes, and clothing.	Usage of safety glasses or googles is recommended. Chemical resistant gloves, chemical resistant apron, boots, and full suit will be necessary depending on the extent of clean up task. If ventilation does not control airborne concentration then respiratory protection equipment that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements should be used.
Methods and materials used for containment	Collect liquid in an appropriate container or absorb with inert material and place in chemical waste container.
Cleanup procedures	Do not flush to sewer. Comply with all federal, state, and local regulations.

Section 7 – Handling and Storage

Precautions for safe handling	Protect container from physical damage. Wear appropriate personal protection equipment. Do not expose containers to open flame, excessive heat, or direct sunlight. Use local exhaust over processing area. Do not eat, drink or smoke around products.
Recommendations on the conditions for safe storage, Storage/handling incompatibilities.	Store in a cool, dry and well ventilated area away from sources of heat, moisture and incompatible materials. Observe all warnings and precautions listed for the product. Keep container closed to prevent contamination.

Section 8 – Exposure Controls/Personal Protection

OSHA Permissible Exposure Limits (PELs)	Not Applicable
American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values	Not Applicable
Other Exposure Limits	AIHA WEEL is 10 mg/m3 for total vapor and aerosol.
Engineering Control	Use mechanical (general) ventilation to control airborne levels below exposure guidelines.
Individual Protection Measures	Wear protective safety glasses or goggles, gloves, apron, vapor respirator.

Section 9 – Physical and Chemical and Chemical Properties

Appearance (physical state, color, etc.)	Liquid, Clear, Blue
Upper/lower flammability or explosive limits	Not Explosive; LOWER: 2.6% (v) UPPER: 12.5% (v)
Odor	Slight to no odor
Vapor pressure	133 Pa / 0.1 mmHg
Odor threshold	Not Applicable
Vapor density (air = 1)	2.10
pH	7.5 - 11.0
Relative density	1.030 - 1.065
Freezing point (as 50%)	-22°F / -31°C
Solubility(ies)	Miscible in water
Initial boiling point and boiling range	311°F / 155°C

Flash point	225°F / 107°C
Evaporation rate (Butyl Acetate = 1)	<1
Flammability (solid, gas)	Not Flammable
Partition coefficient: n-octanol/water	No Data Available
Auto-ignition temperature	> 700°F / > 370°C
Decomposition temperature; and	Not Applicable
Viscosity	~75 cps at 60°F

Section 10 – Stability and Reactivity

Reactivity	Product is stable under typical use temperatures.
Chemical Stability	Product is stable under typical use temperatures.
Hazardous Reactions	Avoid contact with oxidizing materials and strong acids.
Conditions to Avoid	Heat, flames, ignition sources and incompatibles.
Incompatible Materials	Avoid contact with oxidizing agents and strong acids.
Decomposition Products	Carbon dioxide and carbon monoxide may form when heated to decomposition, and Aldehydes, alcohols or other organic acids may also be formed.

Section 11 – Toxicological Information

Likely Routes of Exposure	Eyes / Skin / Ingestion / Inhalation

	Effects from Short Term Exposure	Effects from Long Term Exposure
Delayed Effects	Irritation of affected area	Irritation of affected area
Immediate Effects	Irritation of affected area	Irritation of affected area
Chronic Effects	Not Applicable	N/A
The numerical measures of toxicity (e.g., acute toxicity estimates such as the LD50 (median lethal dose)) - the estimated amount [of a substance] expected to kill 50% of test animals in a single dose.		Skin: The LD50 for skin absorption in rabbits is >10,000 mg/kg Ingestion: The oral LD 50 for rats is 20,000 mg/kg
Description of the symptoms. This description includes the symptoms associated with exposure to the chemical including symptoms from the lowest to the most severe exposure.		Irritation of affected areas.

Listed in the National Toxicology Program (NTP) Report on Carcinogens?	No	**Found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs?**	No	**Found to be a potential carcinogen by OSHA?**	No

Section 12 – Ecological Information

Ecotoxicity	Low Ecotoxicity
Persistence and Degradability	Biodegradable
Bioaccumulation	Does not bioaccumulate significantly
Mobility in Soil	Dissolves in water. If product enters soil, it will be highly mobile and may contaminate ground water
Other Adverse Effects	No Data Available

Section 13 – Disposal Considerations

Do not dump into sewers, on ground or into any bodies of water. Contact local sewer, municipal, state and/or federal agencies to determine appropriate disposal options

Section 14 – Transport Information

Is product DOT regulated in Non-Bulk packaging?	No

DOT BULK

UN number	Not Regulated
UN proper shipping name	Not Regulated
Transport hazard class(es)	Not Regulated
Packing group number	Not Regulated
Environmental hazards (e.g., identify if it is a marine pollutant according to the International Maritime Dangerous Goods Code (IMDG Code))	Not Regulated

Guidance on transport in bulk (according to Annex II of MARPOL 73/783 and the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code (IBC Code))	Not Regulated
Any special precautions which an employee should be aware of or needs to comply with, in connection with transport or conveyance either within or outside their premises	Not Regulated

Section 15 – Regulatory Information (Not indicated anywhere else on this SDS)

Safety Regulations	OSHA Hazard Communication Standard: This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.	
Health Regulations	Not Available	
Environmental Regulations	Not Available	
SARA 311/312	Based upon available information, this material is classified as the following health and/or physical hazards according to Section 311 & 312	Superfund Amendments and Reauthorization Act of 1986 Title III (SARA) Sections 311 and 312: Immediate (Acute) Health Hazard - No; Delayed (Chronic) Health Hazard - No; Fire Hazard - No; Reactive Hazard - No; Sudden Release of Pressure Hazard - No. Section 313: To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.
HMIS	Blue/Health	0
	Red/Flammability	1
	Orange/Physical Hazard	0
	White/Personal Protection	X
NFPA 0 (no hazard) to 4 (severe risk)	Health (Blue)	0
	Flammability (Red)	1
	Instability/Reactivity (Yellow)	N/A
	Special (White)	0
US Toxic Substance Control Act	Components of this product listed in the February 2019 TSCA Inventory update are designated as ACTIVE or are exempt from Inventory requirements under 40 CFR 720.30	
CEPA – Domestic Substances List (DSL)	All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.	

Section 16 – Other Information

This SDS is applicable for all dilutions and containers for this brand of product. The information herein is provided in good faith and believed to be accurate as of the effective revision date shown. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/ user's responsibility to ensure that activities comply with all federal, state, provincial or local law.

Product Dilutions Differentials

Properties[1]	60%	50%	40%	35%	30%	25%
GREEN MOUNTAIN® Non-Toxic Antifreeze		48%				
Performance Additives and Water		52%				
Specific Gravity (15/15°C 60/60°F)		1.025 - 1.054				
Reserve Alkalinity (minimum)		3				
Freeze Point (maximum)		-22°F / -31°C				

[1]Data for the concentrate is based on volume of Propylene Glycol; data for mixtures is based on volume of GREEN MOUNTAIN® Non-Toxic Antifreeze.

Revision Date: 8/12/2019