SAFETY DATA SHEET

KLONDIKE Green Universal Antifreeze 50/50 Ready to Use Formula

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Product name : KLONDIKE Green Universal Antifreeze 50/50 Ready to Use Formula

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Anti-Freeze and De-icing products

Restrictions on use : Must not come into contact with food or be consumed.

1.3. Details of the supplier of the safety data sheet

KLONDIKE Lubricants Corporation
3078 275th Street
Langley, BC V4W 3L4
Canada
General Information 1- 877-293-4691
www.klondikelubricants.com
info@klondikelubricants.com

1.4. Emergency telephone number

Emergency number : 1-800-424-9300
CHEMTREC (24 HOURS)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS classification

Acute toxicity (oral), Category 4	H302 Harmful if swallowed.
Reproductive toxicity, Category 1B	H360 May damage fertility or the unborn child.
Specific target organ toxicity — Repeated exposure, Category 2	H373 May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS labelling

Hazard pictograms (GHS) :

Signal word (GHS) : Danger

Hazard statements (GHS) :
H302 - Harmful if swallowed.
H360 - May damage fertility or the unborn child.
H373 - May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).

Precautionary statements (GHS) :
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe mist, spray, vapours.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear eye protection, protective gloves, protective clothing.
P301+P312 - If swallowed: Call a doctor if you feel unwell.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P314 - Get medical advice/attention if you feel unwell.
P330 - Rinse mouth.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No data available

2.4. Unknown acute toxicity (GHS)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	% (w/w)	GHS classification
Ethylene glycol	(CAS-No.) 107-21-1	50 - 55	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
disodium tetraborate, anhydrous	(CAS-No.) 1330-43-4	0.01 - 0.2	Repr. 1B, H360 STOT RE 2, H373

***Chemical name, CAS number and/or exact concentration have been withheld as a trade secret**

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation : If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash contaminated clothing before reuse. Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting unless directed to do so by medical personnel. Drink plenty of water. Immediately call a POISON CENTER/doctor.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : May cause damage to organs through prolonged or repeated exposure.

Symptoms/effects after inhalation : Inhalation may cause: irritation, coughing, shortness of breath.

Symptoms/effects after skin contact : Repeated or prolonged contact may cause skin irritation.

Symptoms/effects after eye contact : May cause slight irritation. Symptoms may include pain, blinking, tears and redness.

Symptoms/effects after ingestion : Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

4.3. Immediate medical attention and special treatment, if necessary

All treatments should be based on observed signs and symptoms of distress in the patient.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Large fires: Water fog. Water spray. Small fires: Carbon dioxide. Dry powder. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : No specific fire or explosion hazard.

Explosion hazard : Product is not explosive.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear fire/flame resistant/retardant clothing. Wear a self contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid all eye and skin contact and do not breathe vapour and mist. Danger of slipping on leaked or spilled product.

6.1.1. For non-emergency personnel

Protective equipment : Wear suitable protective clothing and gloves. neoprene. natural rubber gloves. Chemical goggles or safety glasses.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Wear suitable protective clothing and gloves. Neoprene or nitrile rubber gloves. Chemical goggles or safety glasses.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Do not allow large quantities, as are, to spread into the environment. Do not discharge into drains or rivers.

6.3. Methods and material for containment and cleaning up

For containment : Absorb and/or contain spill with inert material, then place in suitable container. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Do not allow minor leaks or spills to accumulate on walking surfaces.

Methods for cleaning up : Take up in non-combustible absorbent material and shove into container for disposal.

6.4. Reference to other sections

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid breathing fume/mist/vapours/spray. Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product. Handle in a well-ventilated area. Keep away from sources of ignition - No smoking. Provide good ventilation in process area to prevent formation of vapour. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool well ventilated place. Keep container closed when not in use. Keep away from open flames, hot surfaces and sources of ignition. Do not store near food, foodstuffs, drugs, or potable water supplies.

Incompatible products : Strong oxidizing agents. Strong acids. Strong bases.

Incompatible materials : Sources of ignition.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Green Universal Antifreeze - Ready to Use	
No data available	
Ethylene glycol (107-21-1)	
- ACGIH - Occupational Exposure Limits	
Local name	Ethylene glycol
ACGIH OEL TWA [ppm]	25 ppm (V - Vapor fraction)
ACGIH STEL (mg/m³)	10 mg/m³ (I - Inhalable particulate matter, H - Aerosol only)
ACGIH OEL STEL [ppm]	50 ppm (V - Vapor fraction)
ACGIH OEL C	100 mg/m³
ACGIH OEL C [ppm]	39.4 ppm
Remark (ACGIH)	TLV® Basis: URT irr. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2021
- NIOSH - Occupational Exposure Limits	
NIOSH REL C [ppm]	50 ppm
disodium tetraborate, anhydrous (1330-43-4)	
- ACGIH - Occupational Exposure Limits	
Local name	Borate compounds, inorganic
ACGIH TWA (mg/m³)	2 mg/m³
ACGIH STEL (mg/m³)	6 mg/m³
Remark (ACGIH)	Varies URT irr
- OSHA - Occupational Exposure Limits	
OSHA PEL TWA [1]	10 mg/m³ 8 hours

- NIOSH - Occupational Exposure Limits	
NIOSH REL TWA	1 mg/m³ 10 hours

8.2. Appropriate engineering controls

Appropriate engineering controls : Avoid creating mist or spray. Avoid splashing. Provide local exhaust ventilation of closed transfer systems to minimize exposures.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Wear suitable gloves resistant to chemical penetration. neoprene/natural rubber

Eye protection:

In case of splashing or aerosol production: protective goggles. Chemical goggles or face shield

Skin and body protection:

Wear suitable protective clothing. Impervious clothing. Use safety shoes resistant to chemical products.

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Use an approved respirator equipped with oil/mist cartridges.

Other information:

Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	Green
Odour	:	characteristic
Odour threshold	:	No data available
pH	:	10.2 – 10.8
Melting point	:	-38 °C
Freezing point	:	-36 °C
Boiling point	:	> 197 °C
Flash point	:	> 116 °C
Relative evaporation rate (butylacetate=1)	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	< 0.1 mm Hg (@ 20°C)
Relative vapour density at 20 °C	:	> 1
Relative density	:	No data available
Solubility	:	Material highly soluble in water.
Log Pow	:	No data available
Auto-ignition temperature	:	427 °C
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive limits	:	3.2 vol % Not determined
Explosive properties	:	Product is not explosive.
Oxidising properties	:	No oxidizing properties.

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Exposure to extremely high temperatures.

10.5. Incompatible materials

Strong oxidizing agents. Strong bases. Strong acids.

10.6. Hazardous decomposition products

Carbon dioxide. Carbon monoxide. Nitrogen oxides. Aldehydes. alcohols. Ethers. ammonia.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

ATE (oral)	964.828 mg/kg bodyweight

Ethylene glycol (107-21-1)	
LD50 dermal rat	> 3500 mg/kg (mouse)
LC50 Inhalation - Rat	> 2.5 mg/l/4h
ATE (oral)	500 mg/kg bodyweight

disodium tetraborate, anhydrous (1330-43-4)	
LD50 oral rat	3450 mg/kg male
LD50 dermal rabbit	> 2000 mg/kg
LC50 Inhalation - Rat	> 2.03 mg/l 5h
ATE (oral)	3450 mg/kg bodyweight

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : May damage fertility or the unborn child.

STOT-single exposure : Not classified

STOT-repeated exposure : May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).

Ethylene glycol (107-21-1)	
LOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight/day
NOAEL (oral, rat, 90 days)	150 mg/kg bodyweight/day kidney
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

disodium tetraborate, anhydrous (1330-43-4)	
LOAEL (oral, rat, 90 days)	58.5 mg/kg bodyweight/day
NOAEL (oral, rat, 90 days)	17.5 mg/kg bodyweight/day
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

Likely routes of exposure : Skin and eye contact. Inhalation.

Symptoms/effects : May cause damage to organs through prolonged or repeated exposure.

Symptoms/effects after inhalation : Inhalation may cause: irritation, coughing, shortness of breath.

Symptoms/effects after skin contact : Repeated or prolonged contact may cause skin irritation.

Symptoms/effects after eye contact : May cause slight irritation. Symptoms may include pain, blinking, tears and redness.

Symptoms/effects after ingestion : Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : No ecotoxicological data about this product are known.

Ethylene glycol (107-21-1)	
LC50 fish 1	72860 mg/l Pimephales promelas
EC50 crustacea	> 100 mg/l
NOEC chronic fish	15380 mg/l Pimephales promelas
NOEC chronic crustacea	8590 mg/l Ceriodaphnia sp.

disodium tetraborate, anhydrous (1330-43-4)	
LC50 fish 1	74 mg/l 96h Limanda limanda

12.2. Persistence and degradability

Green Universal Antifreeze - Ready to Use	
Persistence and degradability	Not established.

Ethylene glycol (107-21-1)	
Persistence and degradability	Readily biodegradable.
Biodegradation	> 60 % 28 d

12.3. Bioaccumulative potential

Green Universal Antifreeze - Ready to Use	
Bioaccumulative potential	Does not biaccumulate significantly.

Ethylene glycol (107-21-1)	
Log Pow	- 1.36
Bioaccumulative potential	Not expected to bioaccumulate.

12.4. Mobility in soil

Green Universal Antifreeze - Ready to Use	
Ecology - soil	Dissolves in water. If products enter soil, will be highly mobile and may contaminate ground water.

12.5. Other adverse effects

Other adverse effects : Do not discharge the product into the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Sewage disposal recommendations : Do not dispose of waste into sewer.

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Additional information : In its present state, this product is not a hazardous waste according to Federal Regulations (40 CFFR261.4 (b)(4)). Container rinsate could be considered a RCRA hazardous waste and must be disposed of with care. Container contents should be completely used and containers should be emptied prior to discard. Larger empty containers, such as drums, should be returned to the distributor or to a drum reconditioner.

SECTION 14: Transport information

Transportation of Dangerous Goods

Not regulated.

Transport by sea

Not regulated.

Air transport

Not regulated.

SECTION 15: Regulatory information

National regulations

Green Universal Antifreeze - Ready to Use
All ingredients are listed on the Canadian Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL).

SECTION 16: Other information

Data sources : ACGIH 2000. European Chemicals Agency (ECHA) Registered Substances list. Accessed at http://echa.europa.eu/. Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition. National Fire Protection Association; Fire Protection Guide to Hazardous Materials; 10th edition. OSHA 29CFR 1910.1200 Hazard Communication Standard. TSCA Chemical Substance Inventory. Accessed at http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html.

Other information : None.

Full text of H-statements:

H302	Harmful if swallowed.
H360	May damage fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

Abbreviations and acronyms:

	ACGIH (American Conference of Government Industrial Hygienists)
	ATE: Acute Toxicity Estimate
	ATE: Acute Toxicity Estimate
	CAS (Chemical Abstracts Service) number
	CLP: Classification, Labelling, Packaging.
	EC50: Environmental Concentration associated with a response by 50% of the test population.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	LD50: Lethal Dose for 50% of the test population
	OSHA: Occupational Safety & Health Administration
	TSCA: Toxic Substances Control Act
	STEL: Short Term Exposure Limits
	TWA: Time Weighted Average

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End-use applications **NOT** supported by KLONDIKE® , Inc. for monoethylene glycol, diethylene glycol and triethylene glycol. These limitations include products restricted by law, applications in which may raise unacceptable risks, and other applications which KLONDIKE® , Inc. has decided not to, including minimizing unnecessary risk and liabilities to the company. KLONDIKE® , Inc. does not knowingly market these products into these non-supported applications. This list is not all-inclusive, and KLONDIKE® , Inc. reserves the right to modify the same at any time.

- The use of production of tobacco and in the manufacture of tobacco products (including but not limited to additives, humectants, filters, inks, and paper)
- The use for the generation of artificial smoke / theatrical fogs / mist. This includes applications such as artificial / e-cigarettes.
- The use as ingredient in fuel for warming foods (Sterno™-like application) or in fuel for heating an enclosed space where human exposure is possible.
- The use in fire extinguishing sprinkler systems.
- The use in the manufacture of munitions.
- The use in the production of de-icers for use on roadways, sidewalks and in aircraft lavatories.
- The use as a component of heat transfer fluids in systems where the heat transfer fluids could infiltrate (i.e., via an exchanger leak, backflow prevention failure, or other means) a potable water.
- The use as a non-reacted component in a formulation for direct internal or external human / animal contact, including, but not limited to ingestion, inhalation, and skin contact and in medical / veterinary devices and medial / veterinary. Examples of some such applications are uses as a direct component in foods, beverages, pharmaceuticals, cosmetics, personal care products or children's products.
- The use for consumer or hospital usage for deodorizing or air "purifying" purposes by spraying as an aerosol.
- The use as a non-reacted component in adhesives, plasticizers, and softening agents for packaging having direct contact with food or beverage.
- The use as a non-reacted component in the formulation of glues, pastes, ice / heat packs or other items where the potential for significant human contact and/or ingestion exists (including but not limited to children's school glue/paste or arts/craft glue/paste, toys, children products).
- The use as a fluid for pressure testing piping.