29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : MaxLife™ 50/50 Antifreeze Coolant

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

Recommended use : Antifreeze Coolant

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825) SDS@valvoline.com	**Emergency telephone number** 1-800-VALVOLINE (1-800-825-8654) **Regulatory Information Number** 1-800-TEAMVAL (1-800-832-6825) **Product Information** 1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral) : Category 4

Carcinogenicity : Category 1B

Reproductive toxicity : Category 1B

Specific target organ systemic toxicity - repeated exposure (Oral) : Category 2 (Kidney, Liver)

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : Harmful if swallowed.

May cause cancer.
May damage fertility or the unborn child.
May cause damage to organs (Kidney, Liver) through prolonged or repeated exposure if swallowed.

Precautionary Statements : **Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
IF exposed or concerned: Get medical advice/ attention.
Storage:
Store locked up.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
ETHYLENE GLYCOL	107-21-1	Acute Tox. 4; H302 STOT RE 2; H373	>=50.00 - < 60.00
DIETHYLENE GLYCOL	111-46-6	Acute Tox. 4; H302 STOT RE 2; H373	>=1.50 - < 5.00
DIPOTASSIUM PHOSPHATE	7758-11-4	Acute Tox. 3; H311	>=0.10 - < 0.50
DISODIUM TETRABORATE	1330-43-4	Repr. 1B; H360	>=0.10 - < 0.50

SODIUM NITRATE	7631-99-4	Ox. Sol. 3; H272 Eye Irrit. 2A; H319 Carc. 1B; H350	>=0.10 - < 0.50

SECTION 4. FIRST AID MEASURES

General advice	:	Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled	:	If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	:	First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
In case of eye contact	:	Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. If eye irritation persists, consult a specialist.
If swallowed	:	Obtain medical attention. Rinse mouth with water. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	:	Effects of acute ethylene glycol poisoning appear in three fairly distinct stages. The initial stage occurs shortly after exposure, lasts 6-12 hours, and is characterized by central nervous system effects (transient exhilaration, nausea, vomiting, and in severe cases, coma, convulsions, and possible death). The second stage lasts from 12-36 hours after exposure and is initiated by the onset of coma. This phase is characterized by tachypnia, tachycardia, mild hypotension, cyanosis, and in severe cases, pulmonary edema, bronchopneumonia, cardiac enlargement, and congestive failure. The final stage occurs 24-72 post-exposure and is characterized by renal failure, ranging from a mild increase in blood urea nitrogen and creatinine followed by recovery, to complete anuria with acute tubular necrosis that can lead to death. Oxaluria is found in most cases. The most significant laboratory finding in ethylene glycol intoxication is severe metabolic acidosis.

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:
stomach or intestinal upset (nausea, vomiting, diarrhea)
irritation (nose, throat, airways)
Cough
pain in the abdomen and lower back
cyanosis (causes blue coloring of the skin and nails from lack of oxygen)
lung edema (fluid buildup in the lung tissue)
acute kidney failure (sudden slowing or stopping of urine production)
Convulsions
Harmful if swallowed.
May cause cancer.
May damage fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure if swallowed.

Notes to physician : This product contains ethylene glycol. Ethanol decreases the metabolism of ethylene glycol to toxic metabolites. Ethanol should be administered as soon as possible in cases of severe poisoning since the elimination half-life of ethylene glycol is 3 hours. If medical care will be delayed several hours, give the patient three to four 1-ounce oral "shots" of 86-proof or higher whiskey before or during transport to the hospital. Fomepizole (4-methylpyrazole) is an effective antagonist of alcohol dehydrogenase, and as such, may be used as an antidote in the treatment of ethylene glycol poisoning. Hemodialysis effectively removes ethylene glycol and its metabolites from the body.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion : Alcohols

products		Aldehydes carbon dioxide and carbon monoxide ethers toxic fumes Hydrocarbons
Specific extinguishing methods	:	Product is compatible with standard fire-fighting agents.
Further information	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Ensure adequate ventilation. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.
Other information	:	Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	Do not breathe vapours/dust. Do not smoke. Container hazardous when empty. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8. Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Observe label precautions.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
ETHYLENE GLYCOL	107-21-1	C	50 ppm 125 mg/m3	OSHA P0
		C	40 ppm 100 mg/m3 Vapour	CAL PEL
		TWA	25 ppm Vapour	ACGIH
		STEL	50 ppm Vapour	ACGIH
		STEL	10 mg/m3 Inhalable fraction, Aerosol only	ACGIH
DIETHYLENE GLYCOL	111-46-6	TWA	10 mg/m3	US WEEL
DISODIUM TETRABORATE	1330-43-4	TWA	1 mg/m3	NIOSH REL
		PEL	5 mg/m3	CAL PEL
		TWA	10 mg/m3	OSHA P0
		TWA	2 mg/m3 Inhalable fraction (Borate)	ACGIH
		STEL	6 mg/m3 Inhalable fraction (Borate)	ACGIH

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-

purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear as appropriate:
Impervious clothing
Safety shoes
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : Wash hands before breaks and at the end of workday.
When using do not eat or drink.
When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	liquid
Colour	:	yellow
Odour	:	No data available
Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	212 °F / 100 °C (1,013.333333 hPa) Calculated Phase Transition Liquid/Gas
Flash point	:	> 250 °F / > 121 °C Method: closed cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available

Upper explosion limit	:	15.3 %(V) GLP: Calculated Explosive Limit
Lower explosion limit	:	3.2 %(V) GLP: Calculated Explosive Limit
Vapour pressure	:	23.3333333 hPa (20 °C) Calculated Vapor Pressure
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	1.0716 g/cm3 (15.6 °C)
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Thermal decomposition	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Oxidizing properties	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	Product will not undergo hazardous polymerization.
Conditions to avoid	:	excessive heat
Incompatible materials	:	Acids Aldehydes Alkali metals Alkaline earth metals Bases strong alkalis

	Strong oxidizing agents Sulphur compounds
Hazardous decomposition products	Alcohols Aldehydes carbon dioxide and carbon monoxide ethers Hydrocarbons Organic acids ketones

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Inhalation
Skin contact
Eye Contact
Ingestion

Acute toxicity
Harmful if swallowed.

Product:

Acute oral toxicity	:	Remarks: Ingestion of medications contaminated with diethylene glycol has caused kidney failure and death in humans. Products containing diethylene glycol should be considered toxic by ingestion. Acute toxicity estimate: 967.8 mg/kg Method: Calculation method
Acute dermal toxicity	:	Remarks: Skin absorption of this material (or a component) may be increased through injured skin. Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Components:
ETHYLENE GLYCOL:

Acute oral toxicity	:	LD0 (Human): estimated 1.56 g/kg Assessment: The component/mixture is classified as acute oral toxicity, category 4.
Acute inhalation toxicity	:	LC50 (Rat): 10.9 mg/l Exposure time: 1 h Test atmosphere: dust/mist Assessment: No adverse effect has been observed in acute inhalation toxicity tests.

Acute dermal toxicity : LD50 (Rabbit): 9,530 mg/kg

Acute toxicity (other routes of administration) : LD50 (Rat): 5,010 mg/kg
Application Route: Intraperitoneal

DIETHYLENE GLYCOL:
Acute oral toxicity : LD50 (Human): Expected 1,120 mg/kg
Target Organs: Kidney

Acute inhalation toxicity : LC50 (Rat): > 4.6 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: No adverse effect has been observed in acute inhalation toxicity tests.

Acute dermal toxicity : LD50 (Rabbit): 13,300 mg/kg

DIPOTASSIUM PHOSPHATE:
Acute oral toxicity : LD50 (Rat): > 500 mg/kg

LD50 (Rat, female): > 2,000 mg/kg
Method: OECD Test Guideline 420
Assessment: No adverse effect has been observed in acute oral toxicity tests.

Acute dermal toxicity : LD50 (Rabbit): > 300 mg/kg

LD50 (Rabbit): > 5,000 mg/kg
Method: OECD Test Guideline 402

DISODIUM TETRABORATE:
Acute inhalation toxicity : LC50 (Rat): > 2.03 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: No adverse effect has been observed in acute inhalation toxicity tests.

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Assessment: No adverse effect has been observed in acute dermal toxicity tests.

SODIUM NITRATE:
Acute oral toxicity : LD50 (Rat): ca. 3,430 mg/kg
Method: OECD Test Guideline 401

Skin corrosion/irritation
Not classified based on available information.
Components:
ETHYLENE GLYCOL:
Species : Rabbit

Result : No skin irritation

DIETHYLENE GLYCOL:
Species : Human
Result : Slight, transient irritation

DIPOTASSIUM PHOSPHATE:
Species : Rabbit
Result : Slight, transient irritation

DISODIUM TETRABORATE:
Species : Rabbit
Result : No skin irritation

SODIUM NITRATE:
Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation
Remarks : Information given is based on data obtained from similar substances.

Serious eye damage/eye irritation
Not classified based on available information.
Product:
Remarks : Unlikely to cause eye irritation or injury.

Components:
ETHYLENE GLYCOL:
Result : Slight, transient irritation

DIETHYLENE GLYCOL:
Species : Rabbit
Result : Slight, transient irritation

DIPOTASSIUM PHOSPHATE:
Species : Rabbit
Result : Slight, transient irritation

DISODIUM TETRABORATE:
Result : Slight, transient irritation

SODIUM NITRATE:
Species : Rabbit
Result : Irritating to eyes.
Method : OECD Test Guideline 405

Respiratory or skin sensitisation
Skin sensitisation
Not classified based on available information.
Respiratory sensitisation
Not classified based on available information.

Components:

ETHYLENE GLYCOL:

Test Type	:	Maximisation Test
Species	:	Guinea pig
Assessment	:	Does not cause skin sensitisation.

DIETHYLENE GLYCOL:

Test Type	:	Maximisation Test
Species	:	Guinea pig
Method	:	Directive 67/548/EEC, Annex V, B.6.
Result	:	Did not cause sensitisation on laboratory animals.

DIPOTASSIUM PHOSPHATE:

Test Type	:	Local lymph node assay
Species	:	Mouse
Assessment	:	Did not cause sensitisation on laboratory animals.
Method	:	OECD Test Guideline 429
Remarks	:	Information given is based on data obtained from similar substances.

DISODIUM TETRABORATE:

Test Type	:	Buehler Test
Species	:	Guinea pig
Assessment	:	Does not cause skin sensitisation.
Method	:	OECD Test Guideline 406

Germ cell mutagenicity

Not classified based on available information.

Components:

ETHYLENE GLYCOL:

Genotoxicity in vitro	:	Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Result: negative

DIETHYLENE GLYCOL:

Genotoxicity in vitro	:	Test Type: Ames test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative GLP: yes Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 479 Result: negative GLP: yes
Genotoxicity in vivo	:	Test Type: In vivo micronucleus test Species: Mouse Method: OECD Test Guideline 474

Result: negative
GLP: yes

DIPOTASSIUM PHOSPHATE:
Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Remarks: Information given is based on data obtained from similar substances.

Carcinogenicity
May cause cancer.

IARC Group 2A: Probably carcinogenic to humans

Sodium nitrate	Not Assigned

(nitrate (ingested) under conditions that result in endogenous nitrosation)

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity
May damage fertility or the unborn child.
Components:
DISODIUM TETRABORATE:
Reproductive toxicity - Assessment : Clear evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments

STOT - single exposure
Not classified based on available information.
STOT - repeated exposure
May cause damage to organs (Kidney, Liver) through prolonged or repeated exposure if swallowed.
Components:
ETHYLENE GLYCOL:
Exposure routes : Ingestion
Target Organs : Kidney, Liver
Assessment : May cause damage to organs through prolonged or repeated exposure.

DIETHYLENE GLYCOL:
Exposure routes : Ingestion
Target Organs : Kidney
Assessment : May cause damage to organs through prolonged or repeated exposure.

Aspiration toxicity
Not classified based on available information.

Experience with human exposure
Components:
ETHYLENE GLYCOL:
Ingestion : Target Organs: Kidney

DIETHYLENE GLYCOL:
General Information : Liver
Kidney

Further information
Product:
Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity
Product:
Ecotoxicology Assessment
Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Components:
ETHYLENE GLYCOL:
Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 27,540 mg/l
Exposure time: 96 h
Test Type: static test

LC50 (Pimephales promelas (fathead minnow)): 8,050 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 6,500 - 13,000 mg/l
End point: Growth inhibition
Exposure time: 7 Days

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 32,000 mg/l
Exposure time: 7 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 24,000 mg/l
Exposure time: 7 d

DIETHYLENE GLYCOL:

Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia magna (Water flea)): > 10,000 mg/l Exposure time: 24 h Test Type: static test Method: DIN 38412

DIPOTASSIUM PHOSPHATE:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Test Type: semi-static test Method: OECD Test Guideline 203 Remarks: Information given is based on data obtained from similar substances.
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 Remarks: Information given is based on data obtained from similar substances.
Toxicity to algae	:	EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l End point: Growth inhibition Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 Remarks: Information given is based on data obtained from similar substances. NOEC (Desmodesmus subspicatus (green algae)): > 100 mg/l End point: Growth inhibition Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 Remarks: Information given is based on data obtained from similar substances.

DISODIUM TETRABORATE:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 79.7 mg/l Exposure time: 96 h Remarks: Information refers to the main component.
Toxicity to algae	:	NOEC (Pseudokirchneriella subcapitata (green algae)): 17.5 mg/l End point: Growth inhibition Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 Remarks: Information refers to the main component.
Toxicity to fish (Chronic	:	NOEC (Danio rerio (zebra fish)): 5.6 mg/l

toxicity)

Exposure time: 34 d
Test Type: semi-static test
Method: OECD Test Guideline 210
Remarks: Information refers to the main component.

SODIUM NITRATE**:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1,355 - 2,063 mg/l
Exposure time: 96 h
Method: Static
Remarks: Mortality

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 3,581 mg/l
Exposure time: 48 h
Method: Static

LC50 (Daphnia magna (Water flea)): 665 mg/l
Exposure time: 96 h
Method: Static

Persistence and degradability
Components:

ETHYLENE GLYCOL**:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 90 - 100 %
Exposure time: 10 d
Method: OECD Test Guideline 301

DIETHYLENE GLYCOL**:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 70 - 80 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

DIPOTASSIUM PHOSPHATE**:**

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

DISODIUM TETRABORATE**:**

Biodegradability : Result: The methods for determining biodegradability are not applicable to inorganic substances.

No data available

Bioaccumulative potential
Components:

ETHYLENE GLYCOL**:**

Bioaccumulation : Species: Crayfish (Procambarus)
Bioconcentration factor (BCF): 0.27
Exposure time: 61 d
Concentration: 1000 mg/l
Method: Flow through

Partition coefficient: n-octanol/water : log Pow: -1.36

DIETHYLENE GLYCOL**:**
Bioaccumulation : Species: Leuciscus idus (Golden orfe)
Bioconcentration factor (BCF): 100

Partition coefficient: n-octanol/water : log Pow: -1.47

No data available
Mobility in soil
Components:
No data available
Other adverse effects
No data available
Product:
Additional ecological information : No data available

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International transport regulations

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MX_DG

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant		no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
ETHYLENE GLYCOL	107-21-1	5000	9894

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)
Acute toxicity (any route of exposure)

California Prop. 65

⚠ **WARNING**: Reproductive Harm - www.P65Warnings.ca.gov.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : Not in compliance with the inventory

KECI : Not in compliance with the inventory

PICCS : Not in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TCSI : On the inventory, or in compliance with the inventory

TSCA : On TSCA Inventory

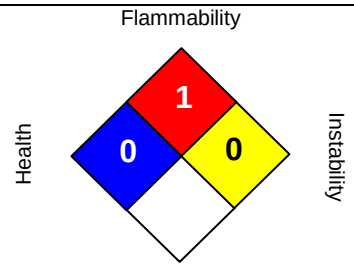
TSCA list

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information
Revision Date: 08/30/2018

NFPA:	HMIS III:



HEALTH	**1***
FLAMMABILITY	**1**
PHYSICAL HAZARD	**0**

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

NFPA Flammable and Combustible Liquids Classification
Combustible Liquid Class IIIB

Full text of H-Statements

H272	May intensify fire; oxidizer.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H319	Causes serious eye irritation.
H350	May cause cancer.
H360	May damage fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure if swallowed.

Sources of key data used to compile the Safety Data Sheet
Valvoline internal data including own and sponsored test reports
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

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. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :
ACGIH : American Conference of Industrial Hygienists
BEI : Biological Exposure Index
CAS : Chemical Abstracts Service (Division of the American Chemical Society).
CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
H-statement : Hazard Statement
IATA : International Air Transport Association.
IATA-DGR : Dangerous Goods Regulation by the “International Air Transport Association” (IATA).

ICAO : International Civil Aviation Organization
ICAO-TI (ICAO) : Technical Instructions by the “International Civil Aviation Organization”
IMDG : International Maritime Code for Dangerous Goods
ISO : International Organization for Standardization
logPow : octanol-water partition coefficient
LCxx : Lethal Concentration, for xx percent of test population
LDxx : Lethal Dose, for xx percent of test population.
ICxx : Inhibitory Concentration for xx of a substance
Ecxx : Effective Concentration of xx
N.O.S.: Not Otherwise Specified
OECD : Organization for Economic Co-operation and Development
OEL : Occupational Exposure Limit
P-Statement : Precautionary Statement
PBT : Persistent , Bioaccumulative and Toxic
PPE : Personal Protective Equipment
STEL : Short-term exposure limit
STOT : Specific Target Organ Toxicity
TLV : Threshold Limit Value
TWA : Time-weighted average
vPvB : Very Persistent and Very Bioaccumulative
WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
DOT : Department of Transportation
FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
HMIRC : Hazardous Materials Information Review Commission
HMIS : Hazardous Materials Identification System
NFPA : National Fire Protection Association
NIOSH : National Institute for Occupational Safety and Health
OSHA : Occupational Safety and Health Administration
PMRA : Health Canada Pest Management Regulatory Agency
RTK : Right to Know
WHMIS : Workplace Hazardous Materials Information System

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : MaxLife™
Antifreeze Coolant

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825) SDS@valvoline.com	**Emergency telephone number** 1-800-VALVOLINE (1-800-825-8654) **Regulatory Information Number** 1-800-TEAMVAL (1-800-832-6825) **Product Information** 1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral) : Category 4

Carcinogenicity : Category 1B

Reproductive toxicity : Category 1B

Specific target organ systemic toxicity - repeated exposure (Oral) : Category 2 (Kidney, Liver)

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : Harmful if swallowed.
May cause cancer.
May damage fertility or the unborn child.
May cause damage to organs (Kidney, Liver) through

prolonged or repeated exposure if swallowed.

Precautionary Statements : **Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
IF exposed or concerned: Get medical advice/ attention.
Storage:
Store locked up.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
ETHYLENE GLYCOL	107-21-1	Acute Tox. 4; H302 STOT RE 2; H373	>=90.00 - <= 100.00
DIETHYLENE GLYCOL	111-46-6	Acute Tox. 4; H302 STOT RE 2; H373	>=1.50 - < 5.00
DIPOTASSIUM PHOSPHATE	7758-11-4	Acute Tox. 3; H311	>=0.50 - < 1.00
DISODIUM TETRABORATE	1330-43-4	Repr. 1B; H360	>=0.50 - < 1.00
SODIUM NITRATE	7631-99-4	Ox. Sol. 3; H272 Eye Irrit. 2A; H319	>=0.10 - < 0.50

		Carc. 1B; H350	

SECTION 4. FIRST AID MEASURES

General advice	:	Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled	:	If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	:	First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
In case of eye contact	:	Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. If eye irritation persists, consult a specialist.
If swallowed	:	Obtain medical attention. Rinse mouth with water. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	:	Effects of acute ethylene glycol poisoning appear in three fairly distinct stages. The initial stage occurs shortly after exposure, lasts 6-12 hours, and is characterized by central nervous system effects (transient exhilaration, nausea, vomiting, and in severe cases, coma, convulsions, and possible death). The second stage lasts from 12-36 hours after exposure and is initiated by the onset of coma. This phase is characterized by tachypnia, tachycardia, mild hypotension, cyanosis, and in severe cases, pulmonary edema, bronchopneumonia, cardiac enlargement, and congestive failure. The final stage occurs 24-72 post-exposure and is characterized by renal failure, ranging from a mild increase in blood urea nitrogen and creatinine followed by recovery, to complete anuria with acute tubular necrosis that can lead to death. Oxaluria is found in most cases. The most significant laboratory finding in ethylene glycol intoxication is severe metabolic acidosis. Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through

the skin may include:
stomach or intestinal upset (nausea, vomiting, diarrhea)
irritation (nose, throat, airways)
Cough
pain in the abdomen and lower back
cyanosis (causes blue coloring of the skin and nails from lack of oxygen)
lung edema (fluid buildup in the lung tissue)
acute kidney failure (sudden slowing or stopping of urine production)
Convulsions
Harmful if swallowed.
May cause cancer.
May damage fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure if swallowed.

Notes to physician : This product contains ethylene glycol. Ethanol decreases the metabolism of ethylene glycol to toxic metabolites. Ethanol should be administered as soon as possible in cases of severe poisoning since the elimination half-life of ethylene glycol is 3 hours. If medical care will be delayed several hours, give the patient three to four 1-ounce oral "shots" of 86-proof or higher whiskey before or during transport to the hospital. Fomepizole (4-methylpyrazole) is an effective antagonist of alcohol dehydrogenase, and as such, may be used as an antidote in the treatment of ethylene glycol poisoning. Hemodialysis effectively removes ethylene glycol and its metabolites from the body.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Alcohols
Aldehydes
carbon dioxide and carbon monoxide
ethers

toxic fumes
Hydrocarbons

Specific extinguishing methods : Product is compatible with standard fire-fighting agents.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Do not breathe vapours/dust.
Do not smoke.
Container hazardous when empty.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Observe label precautions.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
ETHYLENE GLYCOL	107-21-1	C	50 ppm 125 mg/m3	OSHA P0
		C	40 ppm 100 mg/m3 Vapour	CAL PEL
		TWA	25 ppm Vapour	ACGIH
		STEL	50 ppm Vapour	ACGIH
		STEL	10 mg/m3 Inhalable fraction, Aerosol only	ACGIH
DIETHYLENE GLYCOL	111-46-6	TWA	10 mg/m3	US WEEL
DISODIUM TETRABORATE	1330-43-4	TWA	1 mg/m3	NIOSH REL
		PEL	5 mg/m3	CAL PEL
		TWA	10 mg/m3	OSHA P0
		TWA	2 mg/m3 Inhalable fraction (Borate)	ACGIH
		STEL	6 mg/m3 Inhalable fraction (Borate)	ACGIH

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other

circumstances where an air-purifying respirator may not provide adequate protection.

Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear as appropriate:
Impervious clothing
Safety shoes
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : Wash hands before breaks and at the end of workday.
When using do not eat or drink.
When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	liquid
Colour	:	yellow
Odour	:	No data available
Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	212 °F / 100 °C (1,013.333333 hPa) Calculated Phase Transition Liquid/Gas
Flash point	:	> 250 °F / > 121 °C Method: closed cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit	:	15.3 %(V) GLP: Calculated Explosive Limit

Lower explosion limit	:	3.2 %(V) GLP: Calculated Explosive Limit
Vapour pressure	:	23.3333333 hPa (20 °C) Calculated Vapor Pressure
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	1.1202 g/cm3 (15.6 °C)
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Thermal decomposition	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Oxidizing properties	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	Product will not undergo hazardous polymerization.
Conditions to avoid	:	excessive heat
Incompatible materials	:	Acids Aldehydes Alkali metals Alkaline earth metals Bases strong alkalis Strong oxidizing agents Sulphur compounds

Hazardous decomposition products	Alcohols Aldehydes carbon dioxide and carbon monoxide ethers Hydrocarbons Organic acids ketones

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Inhalation
Skin contact
Eye Contact
Ingestion
Acute toxicity
Harmful if swallowed.
Product:

Acute oral toxicity	:	Remarks: Ingestion of medications contaminated with diethylene glycol has caused kidney failure and death in humans. Products containing diethylene glycol should be considered toxic by ingestion. Acute toxicity estimate: 510.89 mg/kg Method: Calculation method
Acute dermal toxicity	:	Remarks: Skin absorption of this material (or a component) may be increased through injured skin. Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Components:
ETHYLENE GLYCOL:

Acute oral toxicity	:	LD0 (Human): estimated 1.56 g/kg Assessment: The component/mixture is classified as acute oral toxicity, category 4.
Acute inhalation toxicity	:	LC50 (Rat): 10.9 mg/l Exposure time: 1 h Test atmosphere: dust/mist Assessment: No adverse effect has been observed in acute inhalation toxicity tests.
Acute dermal toxicity	:	LD50 (Rabbit): 9,530 mg/kg
Acute toxicity (other routes of	:	LD50 (Rat): 5,010 mg/kg

administration) Application Route: Intraperitoneal

DIETHYLENE GLYCOL:

Acute oral toxicity : LD50 (Human): Expected 1,120 mg/kg
Target Organs: Kidney

Acute inhalation toxicity : LC50 (Rat): > 4.6 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: No adverse effect has been observed in acute inhalation toxicity tests.

Acute dermal toxicity : LD50 (Rabbit): 13,300 mg/kg

DIPOTASSIUM PHOSPHATE:

Acute oral toxicity : LD50 (Rat): > 500 mg/kg

LD50 (Rat, female): > 2,000 mg/kg
Method: OECD Test Guideline 420
Assessment: No adverse effect has been observed in acute oral toxicity tests.

Acute dermal toxicity : LD50 (Rabbit): > 300 mg/kg

LD50 (Rabbit): > 5,000 mg/kg
Method: OECD Test Guideline 402

DISODIUM TETRABORATE:

Acute inhalation toxicity : LC50 (Rat): > 2.03 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: No adverse effect has been observed in acute inhalation toxicity tests.

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Assessment: No adverse effect has been observed in acute dermal toxicity tests.

SODIUM NITRATE:

Acute oral toxicity : LD50 (Rat): ca. 3,430 mg/kg
Method: OECD Test Guideline 401

Skin corrosion/irritation

Not classified based on available information.

Components:

ETHYLENE GLYCOL:

Species : Rabbit
Result : No skin irritation

DIETHYLENE GLYCOL:

Species : Human
Result : Slight, transient irritation

DIPOTASSIUM PHOSPHATE:
Species : Rabbit
Result : Slight, transient irritation

DISODIUM TETRABORATE:
Species : Rabbit
Result : No skin irritation

SODIUM NITRATE:
Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation
Remarks : Information given is based on data obtained from similar substances.

Serious eye damage/eye irritation
Not classified based on available information.
Product:
Remarks : Unlikely to cause eye irritation or injury.

Components:
ETHYLENE GLYCOL:
Result : Slight, transient irritation

DIETHYLENE GLYCOL:
Species : Rabbit
Result : Slight, transient irritation

DIPOTASSIUM PHOSPHATE:
Species : Rabbit
Result : Slight, transient irritation

DISODIUM TETRABORATE:
Result : Slight, transient irritation

SODIUM NITRATE:
Species : Rabbit
Result : Irritating to eyes.
Method : OECD Test Guideline 405

Respiratory or skin sensitisation
Skin sensitisation
Not classified based on available information.
Respiratory sensitisation
Not classified based on available information.
Components:
ETHYLENE GLYCOL:
Test Type : Maximisation Test

Species : Guinea pig
Assessment : Does not cause skin sensitisation.

DIETHYLENE GLYCOL:
Test Type : Maximisation Test
Species : Guinea pig
Method : Directive 67/548/EEC, Annex V, B.6.
Result : Did not cause sensitisation on laboratory animals.

DIPOTASSIUM PHOSPHATE:
Test Type : Local lymph node assay
Species : Mouse
Assessment : Did not cause sensitisation on laboratory animals.
Method : OECD Test Guideline 429
Remarks : Information given is based on data obtained from similar substances.

DISODIUM TETRABORATE:
Test Type : Buehler Test
Species : Guinea pig
Assessment : Does not cause skin sensitisation.
Method : OECD Test Guideline 406

Germ cell mutagenicity
Not classified based on available information.
Components:
ETHYLENE GLYCOL:
Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Result: negative

DIETHYLENE GLYCOL:
Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 479
Result: negative
GLP: yes

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse
Method: OECD Test Guideline 474
Result: negative
GLP: yes

DIPOTASSIUM PHOSPHATE:

Genotoxicity in vitro	:	Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Remarks: Information given is based on data obtained from similar substances.

Carcinogenicity

May cause cancer.

IARC Group 2A: Probably carcinogenic to humans

Sodium nitrate	Not Assigned

(nitrate (ingested) under conditions that result in endogenous nitrosation)

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

May damage fertility or the unborn child.

Components:

DISODIUM TETRABORATE:

Reproductive toxicity - Assessment	:	Clear evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

May cause damage to organs (Kidney, Liver) through prolonged or repeated exposure if swallowed.

Components:

ETHYLENE GLYCOL:

Exposure routes	:	Ingestion
Target Organs	:	Kidney, Liver
Assessment	:	May cause damage to organs through prolonged or repeated exposure.

DIETHYLENE GLYCOL:

Exposure routes	:	Ingestion
Target Organs	:	Kidney
Assessment	:	May cause damage to organs through prolonged or repeated exposure.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Experience with human exposure
Components:
ETHYLENE GLYCOL:
Ingestion : Target Organs: Kidney

DIETHYLENE GLYCOL:
General Information : Liver
Kidney

Further information
Product:
Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity
Product:
Ecotoxicology Assessment
Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Components:
ETHYLENE GLYCOL:
Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 27,540 mg/l
Exposure time: 96 h
Test Type: static test

LC50 (Pimephales promelas (fathead minnow)): 8,050 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 6,500 - 13,000 mg/l
End point: Growth inhibition
Exposure time: 7 Days

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 32,000 mg/l
Exposure time: 7 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 24,000 mg/l
Exposure time: 7 d

DIETHYLENE GLYCOL:

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 24 h
Test Type: static test
Method: DIN 38412

DIPOTASSIUM PHOSPHATE:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
Remarks: Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
Remarks: Information given is based on data obtained from similar substances.

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
Remarks: Information given is based on data obtained from similar substances.

NOEC (Desmodesmus subspicatus (green algae)): > 100 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
Remarks: Information given is based on data obtained from similar substances.

DISODIUM TETRABORATE:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 79.7 mg/l
Exposure time: 96 h
Remarks: Information refers to the main component.

Toxicity to algae : NOEC (Pseudokirchneriella subcapitata (green algae)): 17.5 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
Remarks: Information refers to the main component.

Toxicity to fish (Chronic : NOEC (Danio rerio (zebra fish)): 5.6 mg/l

toxicity)		Exposure time: 34 d Test Type: semi-static test Method: OECD Test Guideline 210 Remarks: Information refers to the main component.
SODIUM NITRATE**:**		
Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 1,355 - 2,063 mg/l Exposure time: 96 h Method: Static Remarks: Mortality
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia magna (Water flea)): 3,581 mg/l Exposure time: 48 h Method: Static LC50 (Daphnia magna (Water flea)): 665 mg/l Exposure time: 96 h Method: Static

Persistence and degradability
Components:

ETHYLENE GLYCOL**:**		
Biodegradability	:	Result: Readily biodegradable. Biodegradation: 90 - 100 % Exposure time: 10 d Method: OECD Test Guideline 301
DIETHYLENE GLYCOL**:**		
Biodegradability	:	Result: Readily biodegradable. Biodegradation: 70 - 80 % Exposure time: 28 d Method: OECD Test Guideline 301B
DIPOTASSIUM PHOSPHATE**:**		
Biodegradability	:	Remarks: The methods for determining biodegradability are not applicable to inorganic substances.
DISODIUM TETRABORATE**:**		
Biodegradability	:	Result: The methods for determining biodegradability are not applicable to inorganic substances.

No data available

Bioaccumulative potential
Components:

ETHYLENE GLYCOL**:**		
Bioaccumulation	:	Species: Crayfish (Procambarus) Bioconcentration factor (BCF): 0.27 Exposure time: 61 d Concentration: 1000 mg/l Method: Flow through

Partition coefficient: n-octanol/water : log Pow: -1.36

DIETHYLENE GLYCOL**:**
Bioaccumulation : Species: Leuciscus idus (Golden orfe)
Bioconcentration factor (BCF): 100

Partition coefficient: n-octanol/water : log Pow: -1.47

No data available
Mobility in soil
Components:
No data available
Other adverse effects
No data available
Product:
Additional ecological information : No data available

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International transport regulations

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MX_DG

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant		no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
ETHYLENE GLYCOL	107-21-1	5000	5223

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute toxicity (any route of exposure)
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)

California Prop. 65

⚠ **WARNING**: Reproductive Harm - www.P65Warnings.ca.gov.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : Not in compliance with the inventory

KECI : Not in compliance with the inventory

PICCS : Not in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TCSI : On the inventory, or in compliance with the inventory

TSCA : On TSCA Inventory

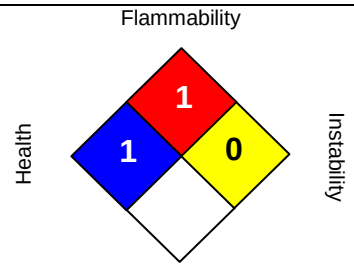
TSCA list

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information
Revision Date: 08/30/2018

NFPA:	HMIS III:



HEALTH	**1***
FLAMMABILITY	**1**
PHYSICAL HAZARD	**0**

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

NFPA Flammable and Combustible Liquids Classification
Combustible Liquid Class IIIB

Full text of H-Statements

H272	May intensify fire; oxidizer.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H319	Causes serious eye irritation.
H350	May cause cancer.
H360	May damage fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure if swallowed.

Sources of key data used to compile the Safety Data Sheet
Valvoline internal data including own and sponsored test reports
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

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. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :
ACGIH : American Conference of Industrial Hygienists
BEI : Biological Exposure Index
CAS : Chemical Abstracts Service (Division of the American Chemical Society).
CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
H-statement : Hazard Statement
IATA : International Air Transport Association.
IATA-DGR : Dangerous Goods Regulation by the “International Air Transport Association” (IATA).

ICAO : International Civil Aviation Organization
ICAO-TI (ICAO) : Technical Instructions by the “International Civil Aviation Organization”
IMDG : International Maritime Code for Dangerous Goods
ISO : International Organization for Standardization
logPow : octanol-water partition coefficient
LCxx : Lethal Concentration, for xx percent of test population
LDxx : Lethal Dose, for xx percent of test population.
ICxx : Inhibitory Concentration for xx of a substance
Ecxx : Effective Concentration of xx
N.O.S.: Not Otherwise Specified
OECD : Organization for Economic Co-operation and Development
OEL : Occupational Exposure Limit
P-Statement : Precautionary Statement
PBT : Persistent , Bioaccumulative and Toxic
PPE : Personal Protective Equipment
STEL : Short-term exposure limit
STOT : Specific Target Organ Toxicity
TLV : Threshold Limit Value
TWA : Time-weighted average
vPvB : Very Persistent and Very Bioaccumulative
WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
DOT : Department of Transportation
FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
HMIRC : Hazardous Materials Information Review Commission
HMIS : Hazardous Materials Identification System
NFPA : National Fire Protection Association
NIOSH : National Institute for Occupational Safety and Health
OSHA : Occupational Safety and Health Administration
PMRA : Health Canada Pest Management Regulatory Agency
RTK : Right to Know
WHMIS : Workplace Hazardous Materials Information System

Eco Lube Recovery
40 Lake Bellevue Drive, Suite 100
Bellevue, WA 98005
425-429-3616
833-ECO-LUBE
www.ecolube.com

SAFETY DATA SHEET

ECO COOL

Pre-diluted, Fully-Formulated, Functional Heavy Duty / Light Duty Extended Life, Pre-charged Coolant (50/50)

SECTION 1 – IDENTIFICATION OF SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

1.1 Product Identifier	Product form: Mixture Product name: Eco Cool Extended Life Antifreeze/Coolant
1.2 Relevant identified uses of the substance or mixture and uses advised against	Use of the substance/ mixture: Automotive Engine Antifreeze and Coolants
1.3 Details of the supplier of the safety data sheet	Eco Lube Recovery 40 Lake Bellevue Drive, Suite 100 Bellevue, WA 98005 425-429-3616 833-ECO-LUBE www.ecolube.com
1.4 Emergency Telephone Number	425-429-3616

SECTION 2 – HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS-US Classification	Acute Tox. 4 (oral)	H302
	STOT RE 2	H373
2.2 Hazard pictograms (GHS-US)	GHS07	
	GHS08	
Signal word (GHS-US)	Warning	
Hazard Statements:	H302-Harmful if swallowed H373 May cause damage to organs (kidneys) through prolonged repeated expose (oral)	

Precautionary statements	P201 Obtain special instructions before use P202 Do not handle until all safety precautions have been read and understood P260 do not breath mist, spray or vapors P264 Wash affected areas thoroughly after handling P270 Do not eat drink or smoke when using this product P280 wear personal proactive equipment as required P301+P310 If swallowed: Immediately call doctor/physician or poison center P3010+P330-P331 if swallowed: rise mouth. Do not induce vomiting P304+P340 If inhaled: remove person to fresh air and keep comfortable for breathing P501 Dispose of contents/container, in a safe manner, to appropriate waste disposal facility in accordance with local/regional/national/international regulations

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance Nat applicable

3.2 Mixture

Name	**Product identifier**	% by wt	GHS-US classification
Ethylene glycol	(CAS No) 107-21-1	< = 50	Acute tox. 4 (oral), H302
Water	CAS No) 7732-18-5	< 50	Not classified
Diethylene Glycol	(CAS No) 1141-46-6	< 3	Acute Tox 4 (oral), H302 STOT RE 2, H373
Undisclosed inhibitors		< 3.8	

SECTION 4 – FIRST AID MEASURES

4.1 Emergency and First Aid Procedures:

Eye contact: Immediately flush with large quantities of water for at least 15 minutes and

Skin contact: Remove excess with cloth or paper towel. Wash thoroughly with soap and water. If irritation persists, get medical attention.

Ingestion: Immediately contact a physician, poison control center or emergency treatment center. DO NOT induce vomiting. Aspiration Hazard: Product may be inhaled into lungs if vomited.

Inhalation: Remove to fresh air. Restore and/or support breathing as required. Keep victim warm and at rest.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms/ injuries: Causes damage to organs (Kidneys) (Oral)
Symptoms/injuries after skin contact: Causes skin irritation
Symptoms/injuries after eye contact: Causes eye damage
Symptoms/injuries after ingestion: Swallowing a small quantity of this material will result in serious health hazard. The lethal dose in humans is estimated to be 100 mL (3 oz)

4.3 Indication of any immediate medical attention and special treatment needed

A More effective intravenous antidote for physician uses is 4-methylpyrazaole, a potent inhibitor of alcohol dehydrogenase, which effetely blocks the formation of toxic metabolites of ethylene glycol. It has been used to decrease the metabolic consequences of the ethylene glycol poisoning before metabolic acidosis coma, seizures, and renal failure have occurred.

SECTION 5 – FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media	Water fog. Fine water spray. Alcohol- resistant foam. Foam. Carbon dioxide. Dry chemical powder. Sand. Dry Powder
Unsuitable extinguishing media	Do not use a heavy water stream. May spread fire.
5.2 Special hazards arising from the substance or mixture	
Fire Hazard	During a fire, smoke may contain the original material in addition to the combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to carbon monoxide and carbon dioxide
Reactivity	No dangerous reactions known under normal conditions of uses
5.3 Advice for firefighters	
Firefighter instructions	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from the environment
Protection during firefighting	Do not enter fire area without proper protective equipment, including respiratory protection
Special protective equipment for fire fighters	Wear positive pressure self-contained breathing apparatus (SCBA). Protective fire-fighting clothing (Included fire-fighting helmet, coat, boots and gloves).

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures	Evacuate unnecessary personnel Equip cleanup crew with proper protection
6.2 Environmental precaution	Prevent entry to sewer and pubic waters. Notify authorizes if liquids enters sewer or pubic water

SECTION 7 – HANDLING AND STORAGE

7.1 Precautions for safe handling	Wash hands and other exposed areas with mid soap with water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.
7.2 Conditions for safe storage	Keep only in the original container in a cool, well ventilated place from heat sources. Keep container closed when not in use. Product may become solid at temperatures below -34 deg F. Do not store near food, potable water supplies. Do not cut, drill, weld, uses a blow torch on even when container is empty.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters	
Ethylene glycol (107-21-1)	USA ACGIH Ceiling (mg/m3) 100.00 mg/m3 USA ACGIH Remark (ACGIH) Upper Respiratory Tract (URT) & Eye irritant
8.2 Exposure controls	
Personal Protective Equipment (PPE)	Avoid all unnecessary exposure. Gloves and Safety Glasses Hand Protection: Wear protective gloves Eye Protection: Chemical goggles and Safety glasses Respiratory Protection: If exposed to levels above exposure limits wear appropriate respiratory protection

Comments:	Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties	
Physical State / Color / Odor	Liquid / Yellow / Mild
pH	7.6-9.0
Freezing / Boling / Flash point / Auto-ignition temperature	-37°C (-34°F) / 107°C (224°F) / 116°C (241°F)100%EG / 400°C (752°F)100%EG
Specific Gravity / Density	1.04 / 1.04kg/l (8.7 lbs/gal)
9.2 Other Content	VOC content 0.00%

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity	No dangerous reactions known under normal conditions of use
10.2 Chemical Stability	Stable
10.3 Possibility of hazardous reactions	Hazardous polymerization will not occur
10.4 Conditions to avoid	Keep away from any flames or sparking source. Extremely high or low temperatures
10.5 Incompatible materials	Keep away from strong acids, strong bases and oxidizing agents
10.6 Hazardous decomposition products	Carbon dioxide, carbon monoxide, fume, alcohols, aldehydes, ethers

SECTION 11 – TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects	
Ethylene Glycol (107-21-1)	
LD50 oral rat	>5,000 mg/kg (Rat)
ATE US (oral)	500 mg/kg bodyweight
Diethylene glycol (111-46-6)	
LD50 oral rat	12,565 mg/kg (Rat)
ATE US (oral)	11,890 mg/kg bodyweight
Eye Effects:	Believed to cause slight eye irritation.
Skin Effects:	Can be irritating to skin upon prolonged contact
Acute Inhalation Effects:	Drowsiness, narcosis, and unconsciousness possible upon exposure to high concentrations in poorly ventilated confined spaces.
Acute Oral Effects:	Can cause irritation to mouth, throat and stomach
Chronic Effects:	Liver and kidney damage in a 2 year rat feeding study using 1-2% Ethylene Glycol. Oral administration of very high doses of Ethylene Glycol produced

	birth defects in laboratory animals.
Carcinogenicity:	Neither product nor its ingredients are listed by IARC, NTD or OSHA
Mutagenicity:	Not mutagenic
Teratogenicity:	Not Teratogenic

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity

Ethylene glycol (107-21-1)

LC50 fish 1	53,000 mg/l
EC50 Daphnia 1	>10,000 mg/l
LC50 fish 2	40,761 mg/l
Threshold limit algae 1	>10,000mg/l
Threshold limit algae 2	2,000 mg/l

Diethylene glycol (111-46-6)

LC50 fish 1	>5,000 mg/l
EC50 Daphnia 1	>10,000 mg/l
LC50 fish 2	61,072 ppm
Threshold limit algae 1	2,700 mg/l
Threshold limit algae 2	100 mg/l

12.2 Persistence and Degradability

Ethylene glycol (107-21-1)

Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Not established
Biochemical Oxygen Demand BOD)	0.47 g O2/g Substance
Chemical Oxygen Demand (COD)	1.24 g O2/g Substance
ThOD	1.29 g O2/g Substance
BOD (%of ThOD)	0.36 % ThOD

Diethylene glycol (111-46-6)

Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Photolysis in the air
Biochemical Oxygen Demand BOD)	0.02 g O2/g Substance
Chemical Oxygen Demand (COD)	1.51 g O2/g Substance
ThOD	1.51 g O2/g Substance
BOD (%of ThOD)	0.015 % ThOD

12.3 Bioaccumulative Potential

Ethylene glycol (107-21-1)

BCF fish 1	10
BCF other aquatic organisms 1	0.12-.6
BCF other aquatic organisms 2	190
Log Pow	-1.34
Bioaccumulative Potential	Low potential for bioaccumulation (BCF < 500). Not established

Diethylene glycol (111-46-6)

Log Pow	-1.98
Bioaccumulative Potential	Bioaccumulation: not applicable

12.4 Mobility in soil

Ethylene glycol (107-21-1)

Surface tension	0.048 N/m (20°C 68°F)

Diethylene glycol (111-46-6)

Surface tension	.0485 N/m

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste Treatment methods

Waste Disposal Method:	Dispose of waste in accordance with Federal, State and Local laws.
Disposal Regulatory Requirements:	Under RCRA, it is the responsibility of the user of products to determine, at the time of disposal, whether product meets RCRA criteria for hazardous waste. This is because product uses transformations, mixture, processes, etc., may render the resulting material hazardous (see waste classification)
Container Cleaning and Disposal:	Containers should be cleaned of residual product before disposal, and disposed of in accordance with all applicable laws and regulations.

SECTION 14 – TRANSPORT INFORMATION

DOT Proper Shipping Name:	None required if container(s) hold less than 5,000 lb (~535 gal)
DOT Hazards classes	9 – Class 9 – Miscellaneous dangerous material 49 CFR 173-140
Transport document description	UN3082 Environmentally hazardous substance, liquid, n.o.s., 9, III
UN-No. (DOT)	3082
DOT NA No.	UN3082
Hazard labels (DOT	9 – Class 9 (Miscellaneous Dangerous materials)

Bulk Shipments

DOT Proper Shipping Name:	Environmentally hazardous substance, liquid, n.o.s. (Ethylene glycol)
UN Number:	UN 3082
Label Requirement:	Class 9, UN 3082
DOT Packaging Exceptions (49 CFR 173.xxx)	155
DOT Packaging non Bulk (49 CFR 173.xxx)	203
DOT Packaging Bulk (49 CFR 173.xxx)	241

SECTION 15 – REGULATORY INFORMATION

15.1 US Federal regulations

EPA TSCA Regulatory Flag	Toxic Substances Control Act (TSCA): The intentional ingredients of this product are listed
Ethylene glycol (107-21-1)	Listed on the United State TSCA (Toxic Substance Control Act) Inventory Listed on The Unites States SARA Section 313 RQ (Reportable quantity, section 304 of EPA's List of Lists) 5,000 lb(s) SARA Section 311/312 Hazard Classes: Immediate (acute) health hazard Delayed (chronic) health hazard Ethylene glycol is subject to Tier 1 / or Tier II annual inventory reporting SARA Section 313 – Emission Reporting Ethylene glycol is subject to Form R Reporting requirements
Diethylene Glycol (111-46-6)	Listed on the United State TSCA (Toxic Substance Control Act) Inventory

15.2 International regulations

CANADA

WHMIS Classification	Class D Division 2 Subdivision A – Very toxic material causing other toxic effects

15.2.2 National Regulations

15.3 US State Regulations

SECTION 16 – OTHER INFORMATION

Additional Hazard Rating Systems: None

Disclaimer: THE INFORMATION GIVEN HEREIN IS GIVEN IN GOOD FAITH AND FROM SOURCES WE BELIEVE RELIABLE. BUT NO WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS CORRECTNESS IS MADE.

The conditions or methods of handling, storage, use and disposal of this product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.

This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not apply.

CONSULT COMPANY LISTED IN SECTION 1 FOR FURTHER INFORMATION.

EcoLube Recovery, LLC.
1011 E. Main St.
Puyallup WA 98372
833-ECO-LUBE

www.ecolubrecovery.com

SAFETY DATA SHEET

Windshield Washer Fluid Winter Formula

SECTION 1 – IDENTIFICATION OF SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

1.1 Product Identifier	Product form: Mixture Product name: : Premium Windshield Washer Fluid – Winter Blend
1.2 Relevant identified uses of the substance or mixture and uses advised against	Use of the substance/ mixture: Automotive Window Washer Fluid
1.3 Details of the supplier of the safety data sheet	EcoLube Recovery, LLC. 1011 E. Main St. Puyallup WA 98372
1.4 Emergency Telephone Number	833-ECO-LUBE www.ecoluberecovery.com

SECTION 2 – HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS-US Classification	Flammable Liquids –	Category 3
	Acute Toxicity - Oral	Category 3
	Eye Irritation-	Category 2A
	Reproductive Toxicity-	Category 1

2.2 Hazard pictograms (GHS-US)

Signal word (GHS-US)	Danger
Hazard Statements:	Flammable liquid and vapor. Toxic if swallowed. Causes serious eye irritation. May cause damage to organs. May cause drowsiness or dizziness
Precautionary statements	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/Bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Take action to prevent static discharges. Use non-sparking tools. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance		Not applicable	
3.2 Mixture			
Name	**Product identifier**	% by wt	GHS-US classification
Methyl alcohol	(CAS No) 67-56-1	< 8	
Additives	NA	< 1	Not classified

SECTION 4 – FIRST AID MEASURES

4.1 Emergency and First Aid Procedures:	**Eye contact:**	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.
	Skin contact:	IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. Take off contaminated clothing and wash before reuse.
	Ingestion:	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.
	Inhalation:	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
4.2 Most important symptoms and effects, both acute and delayed	Symptoms/injuries after skin contact: May causes skin irritation Symptoms/injuries after eye contact: May cause mild irritation or reddness Symptoms/injuries after ingestion: Swallowing small amounts may be harmful	
4.3 Indication of any immediate medical attention and special treatment needed	Exposure to this material may aggravate any preexisting condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease or anemias.	

SECTION 5 – FIRE-FIGHTING MEASURES

5.1 Extinguishing media	Dry chemical, Carbon Dioxide, water spray, or foam. Water may be ineffective but may be used to cool exposed containers to prevent pressure build-up and possible auto-ignition or explosion when exposed to extreme heat.
5.2 Special hazards arising from the substance or mixture	
Fire Hazard	During a fire, smoke may contain the original material in addition to the combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to carbon monoxide and carbon dioxide
Reactivity	No dangerous reactions known under normal conditions of uses
5.3 Advice for firefighters	
Firefighter instructions	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering the environment
Protection during firefighting	Do not enter fire area without proper protective equipment, including respiratory protection
Special protective equipment for fire fighters	Wear positive pressure self-contained breathing apparatus (SCBA). Protective fire fighting clothing (Included fire-fighting helmet, coat, boots and gloves).

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures	Evacuate unnecessary personnel Equip cleanup crew with proper protection

6.2 Environmental precaution	Prevent entry to sewer and public waters. Notify authorizes if liquids enters sewer or public water

SECTION 7 – HANDLING AND STORAGE

7.1 Precautions for safe handling	Keep away from heat, sparks, or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean, sparkproof tools and explosion-proof equipment. When transferring product, metal containers, including trucks and tank cars, should be grounded and bonded. Do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, shoes. Do not smoke while using this product. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.
7.2 Conditions for safe storage	Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up. Keep containers away from heat, flame, sparks, static electricity, or other sources of ignition. Keep container tightly closed. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Empty product containers may retain product residue and can be dangerous. Protect from sunlight.
7.3 Incompatible Materials	Acids, halocarbons, combustible materials, metals, oxidizing materials, halogens, metal carbide, bases, amines

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Methyl alcohol (67-56-1)	USA ACGIH Ceiling (mg/m3) 260.00 mg/m3 USA ACGIH Remark (ACGIH) Skin - potential significant contribution to overall exposure by the cutaneous route

8.2 Exposure controls

Personal Protective Equipment (PPE)	Avoid all unnecessary exposure. Gloves and Safety Glasses Hand Protection: Wear protective gloves Eye Protection: Chemical goggles and Safety glasses Respiratory Protection: If exposed to levels above exposure limits wear appropriate respiratory protection

Comments:	Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical State / Color / Odor	Clear, Blue liquid, Mild alcohol odor
pH	7.5 - 9
Freezing / Boling / Flash point	-40°C (-40°F) / 69°C (156.2°F) / 13°C (53°F)100%EG
Specific Gravity / Density	.9562 @ 70 F

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity	No dangerous reactions known under normal conditions of use
10.2 Chemical Stability	Stable

10.3 Possibility of hazardous reactions	Hazardous polymerization will not occur
10.4 Conditions to avoid	Keep away from any flames or sparking source. Extremely high or low temperatures
10.5 Incompatible materials	Keep away from strong acids, strong bases and oxidizing agents
10.6 Hazardous decomposition products	Carbon dioxide, carbon monoxide, fume, alcohols, aldehydes, ethers

SECTION 11 – TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Methyl alcohol (67-56-1)	Oral LD50 Rat 6200 mg/kg; Dermal LD50 Rabbit 15840 mg/kg; Inhalation LC50 Rat 22500 ppm 8 h
Eye Effects:	Believed to cause slight eye irritation.
Skin Effects:	Can be irritating to skin upon prolonged contact
Acute Inhalation Effects:	Drowsiness, narcosis, and unconsciousness possible upon exposure to high concentrations in poorly ventilated confined spaces.
Acute Oral Effects:	Can cause irritation to mouth, throat and stomach
Carcinogenicity:	Neither product nor its ingredients are listed by IARC, NTD or OSHA
Mutagenicity:	Not mutagenic
Teratogenicity:	Not Teratogenic

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity

Methyl Alcohol (67-56-1)

LC50 fish 96h	28,200 mg/l

12.2 Persistence and Degradability

No information available for the product

12.3 Bioaccumulative Potential

No information available for the product

12.4 Mobility in soil

No information available for the product

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste Treatment methods

Waste Disposal Method:	Dispose in accordance with federal, state, provincial, and local regulations. The responsibility for proper waste disposal lies with the owner of the waste. Regulations may also apply to empty containers. Contact ChemTrec at (800)262-8200 regarding proper recycling or disposal.

SECTION 14 – TRANSPORT INFORMATION

DOT Proper Shipping Name:	METHANOL
DOT Hazards classes	3 (6.1)
UN.NA #	UN3082
Packing Group	II

SECTION 15 – REGULATORY INFORMATION

15.1 US Federal regulations

EPA TSCA Regulatory Flag	Toxic Substances Control Act (TSCA): The intentional ingredients of this product are listed

Methyl Alcohol (67-56-1)	This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan. Methyl alcohol 67-56-1 SARA 313: 1 % de minimis concentration CERCLA: 5000 lb final RQ ; 2270 kg final RQ SARA Section 311/312 (40 CFR 370 Subparts B and C) 2016 reporting categories Acute Health: Yes Chronic Health: Yes Fire: Yes Pressure: No Reactivity: No
15.2 International regulations	
CANADA	
WHMIS Classification	No information available.
15.2.2 National Regulations	No information available.
15.3 US State Regulations	No information available.

SECTION 16 – OTHER INFORMATION

Additional Hazard Rating Systems: None

Disclaimer: THE INFORMATION GIVEN HEREIN IS GIVEN IN GOOD FAITH AND FROM SOURCES WE BELIEVE RELIABLE. BUT NO WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS CORRECTNESS IS MADE.

The conditions or methods of handling, storage, use and disposal of this product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.

This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not apply.

CONSULT COMPANY LISTED IN SECTION 1 FOR FURTHER INFORMATION.