

Material Safety Data Sheet

Material Name: Autoguard Ready Fill 50% Coolant Protectant

ID: AG-001

*** Section 1 - Chemical Product and Company Identification ***

Manufacturer's Part Number: 3-06-15004

Chemical Name: Ethylene Glycol Solution

Product Use: Antifreeze in heating and cooling systems

Synonyms: NA

Manufacturer Information

Warren Oil

2340 Hwy 301 North

Dunn, NC

Phone: 800-779-6456

Emergency # 800-779-6456

*** Section 2 - Composition / Information on Ingredients ***

CAS #	Component	Percent
7732-18-5	Water	50
107-21-1	Ethylene Glycol	48-50
Not Available	Aqueous Solution of Nitrates, Nitrites and Sodium Hydroxide	1-2
111-46-6	Diethylene Glycol	1-2

Component Information/Information on Non-Hazardous Components

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

*** Section 3 - Hazards Identification ***

Emergency Overview

Product is a non-flammable, green liquid. Product is a corrosive, amber aqueous solution with slight odor. This product is harmful by inhalation and when in contact with the skin. Harmful or fatal if swallowed. This product contains components which may be absorbed through the skin.

Hazard Statements

No information is available.

Potential Health Effects: Eyes

This product is irritating to the eyes. Contact with liquid may produce severe eye irritation, causing severe conjunctival irritation, corneal defects and possibly permanent loss of vision.

Potential Health Effects: Skin

Prolonged or repeated contact with skin may cause irritation. This product may be harmful if it is absorbed through the skin.

Potential Health Effects: Ingestion

May cause dizziness, incoordination, headache, nausea, vomiting and unconsciousness. Cardiac failure and pulmonary edema may develop after ingestion of this material. Swallowing large volumes of ethylene glycol can lead to kidney damage.

Potential Health Effects: Inhalation

Excessive inhalation of this product may cause headache, dizziness, blurred vision, nausea and vomiting. Exposure to high concentrations of vapor may cause central nervous system depression. Exposure to vapors or mists may cause damage to the kidneys, liver, lungs and blood.

HMIS Ratings: Health: 2 Fire: 1 Reactivity: 0 Pers. Prot.: gloves, goggles

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

*** Section 4 - First Aid Measures ***

First Aid: Eyes

Flush eyes with large amounts of water for 15 minutes. Get medical attention if eye irritation develops or persists.

First Aid: Skin

In case of contact, wash thoroughly with soap and large amounts of water. If irritation develops, get medical attention.

First Aid: Ingestion

If the material is swallowed, get immediate medical attention or advice -- Do not induce vomiting.

First Aid: Inhalation

If affected, remove individual to fresh air. If the affected person is not breathing, apply artificial respiration. Get medical attention if symptoms persist.

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First Aid: Notes to Physician

Provide general supportive measures and treat symptomatically. Early administration of ethanol may counter the toxic effects of ethylene glycol -- metabolic acidosis and renal damage. Hemodialysis or peritoneal dialysis have been of benefit.

*** Section 5 - Fire Fighting Measures ***

Flash Point: Not Available

Method Used: Not Available

Upper Flammable Limit (UFL): Not Available

Lower Flammable Limit (LFL): Not Available

Auto Ignition: Not Available

Flammability Classification: Not Available

Rate of Burning: Not Available

General Fire Hazards

No fire or explosion hazards expected under normal storage and handling conditions. Product may form flammable vapors with air if heated sufficiently.

Hazardous Combustion Products

Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Decomposition of this product may yield oxides of sulfur and nitrogen. Oxides of boron, oxides of phosphorus and oxides of silicon may also be released.

Extinguishing Media

Water fog, alcohol-resistant foam, carbon dioxide, or dry chemical. Use water to cool fire-exposed containers and to protect personnel. Direct water spray or foam may cause frothing and spattering. If a leak or spill has not ignited, use water spray to disperse vapors and to flush spills away from exposure.

Fire Fighting Equipment/Instructions

Firefighters should wear full-face, self contained breathing apparatus and impervious protective clothing. Firefighters should avoid inhaling any combustion products.

NFPA Ratings: Health: 2 Fire: 1 Reactivity: 0 Other:

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

*** Section 6 - Accidental Release Measures ***

Containment Procedures

Stop the flow of material, if this is without risk.

Clean-Up Procedures

Absorb spill with an inert absorbent. Scoop up used absorbent into drums or other appropriate container.

Evacuation Procedures

Isolate area. Keep unnecessary personnel away.

Special Procedures

Wear appropriate protective equipment and clothing during clean-up. Avoid skin contact and inhalation of vapors during disposal of spills. Surfaces may become slippery after spillage.

*** Section 7 - Handling and Storage ***

Handling Procedures

Do not get this material in your eyes, on your skin, or on your clothing. Wash thoroughly after handling. Avoid prolonged or repeated breathing of this material. Use this product with adequate ventilation.

Storage Procedures

Keep this material away from food, drink and animal feed. Keep this product away from children and pets. Do not store near heat, sparks, open flame or strong oxidizing agents. Do not store this material in open or unlabeled containers. "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode.

*** Section 8 - Exposure Controls / Personal Protection ***

Exposure Guidelines

A: General Product Information

As a precaution, exposure to liquids, vapors, fumes or mists should be minimized.

B: Component Exposure Limits

Ethylene Glycol (107-21-1)

ACGIH: aerosol: 100 mg/m³

OSHA: C 50 ppm; C 125 mg/m³

NIOSH: no established RELs - see Appendix D

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Engineering Controls

Use general ventilation and use local exhaust, where possible, in confined or enclosed spaces. Additional area ventilation or local exhaust may be required to maintain air concentrations below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Wear safety glasses with side shields. Wear chemical goggles; face shield (if splashing is possible).

Personal Protective Equipment: Skin

Wear impervious gloves. Use of protective coveralls and long sleeves is recommended.

Personal Protective Equipment: Respiratory

Use an organic vapor respirator for concentrations exceeding the occupational exposure limits. Use supplied-air respiratory equipment as required.

Personal Protective Equipment: General

Eyewash fountains and emergency showers are recommended. Eyewash fountains and emergency showers are required.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance:	Light fluorescent green	Odor:	Not Available
Physical State:	Liquid	pH:	(100%) 10-11
Vapor Pressure:	Not Applicable	Vapor Density:	Not Applicable
Boiling Point:	Not Applicable	Melting Point:	Not Applicable
Solubility (H2O):	Not Applicable	Specific Gravity:	1.07-1.08
Freezing Point:	-34 F (-37 C)		

Physical Properties: Additional Information

None.

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Chemical Stability

Stable

Chemical Stability: Conditions to Avoid

Avoid excessive heat and ignition sources.

Incompatibility

Strong oxidizing agents (peroxides, chlorine, strong acids). This product may react with ammonium compounds and reducing agents, particularly cyanides, thiocyanates and thiosulfates. Sodium nitrite may react with organic amines to form nitrosamines.

Hazardous Decomposition

Carbon dioxide, carbon monoxide, oxides of sulfur and nitrogen. Oxides of boron, oxides of phosphorus and oxides of silicon may be released.

Hazardous Polymerization

Will not occur.

* * * Section 11 - Toxicological Information * * *

Acute Toxicity

A: General Product Information

Ingestion of nitrites may produce toxicity because nitrites convert hemoglobin into methemoglobin. This produces tissue anoxia and development of symptoms including cyanosis, nausea, vertigo, vomiting, abdominal pain, convulsions, coma and possibly death. It has also been reported that sodium nitrite may be absorbed through the skin.

B: Component Analysis - LD50

Ethylene Glycol (107-21-1)

Inhalation LC50 Rat: 10876 mg/kg

Oral LD50 Rat: 4700 mg/kg

Oral LD50 Mouse: 5500 mg/kg

Dermal LD50 Rabbit: 9530 uL/kg

Diethylene Glycol (111-46-6)

Oral LD50 Rat: 12565 mg/kg

Oral LD50 Mouse: 23700 mg/kg

Dermal LD50 Rabbit: 11890 mg/kg

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Carcinogenicity

A: General Product Information

No data available on the product as a whole.

B: Component Carcinogenicity

Ethylene Glycol (107-21-1)

ACGIH: A4 - not classifiable as a human carcinogen

Epidemiology

The majority of reported ethylene glycol fatalities are due to kidney failure.

Neurotoxicity

Ethylene glycol causes central nervous system effects such as irregular eye movements, headache, tremors, drowsiness, coma and convulsions. In the late stages of toxicity cranial nerves have been affected, causing bilateral facial paralysis, diminished hearing and difficulty swallowing.

Mutagenicity

Ethylene glycol caused DNA inhibition in human lymphocytes. It induced chromosomal aberrations in rat bone marrow cells and spermatids. Ethylene glycol was not mutagenic in the Salmonella/microsome assay (Ames assay).

Teratogenicity

Ethylene glycol has been fetotoxic, caused developmental abnormalities and maternal effects in laboratory mice and rats.

Other Toxicological Information

None.

*** Section 12 - Ecological Information ***

Ecotoxicity

No information is available. Keep product out of sewers and waterways.

Environmental Fate

In an aquatic environment, ethylene glycol will biodegrade readily in water (half-life 3 days). It is not expected to adsorb to the sediment. Biodegradation in the soil is expected to be fast. Ethylene glycol may leach into the ground water. In the atmosphere, ethylene glycol will photochemically degrade (half-life about 1 day).

*** Section 13 - Disposal Considerations ***

US EPA Waste Number & Descriptions

A: General Product Information

Product as shipped does not meet the definition or characteristics of a hazardous waste.

B: Component Waste Numbers

No information is available.

Disposal Instructions

Do not allow this material to drain into sewers/water supplies. All wastes must be handled in accordance with local, state and federal regulations.

*** Section 14 - Transportation Information ***

US DOT Information

Shipping Name: Not regulated as a hazardous material

Hazard Class: Not regulated

UN/NA #: Not regulated

Packing Group: Not regulated

Required Label(s): No labels required

Additional Info.: None

International Transportation Regulations

Not regulated as dangerous goods.

*** Section 15 - Regulatory Information ***

US Federal Regulations

A: General Product Information

All known (non-proprietary) components of this product are listed on the US EPA TSCA Inventory.

B: Component Analysis

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) and/or CERCLA (40 CFR 302.4).

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Ethylene Glycol (107-21-1)

SARA 313: form R reporting required for 1.0% de minimus concentration

CERCLA: final RQ = 5000 pounds (2270 kg)

State Regulations

A: General Product Information

Other state regulations may apply.

B: Component Analysis - State

Component	CAS #	CA	FL	MA	MN	NJ	PA
Ethylene Glycol	107-21-1	Yes	Yes	Yes	Yes	Yes	Yes
Diethylene Glycol	111-46-6	No	No	No	Yes	No	Yes

Other Regulations

A: General Product Information

No additional information.

B: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Water	7732-18-5	Yes	Yes	Yes
Ethylene Glycol	107-21-1	Yes	Yes	Yes
Diethylene Glycol	111-46-6	Yes	Yes	Yes

C: Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Ethylene Glycol	107-21-1	1% item 716 (860)

* * * Section 16 - Other Information * * *

Other Information

This information is, to the best of **Warren Oil's** knowledge and belief, accurate and reliable. However, no representation, warranty, or guarantee is made to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.. Preparation Information: New MSDS 03/31/1997, name revision 04/08/1997.

Key/Legend

N = No; Y = Yes; ppm - parts per million; mg/m³ = milligrams per cubic meter of air; ACGIH = American Conference of Governmental Industrial Hygienists; OSHA = Occupational Safety and Health Administration; TLV = Threshold Limit Value; NIOSH = National Institute of Occupational Safety and Health; NTP = National Toxicology Program; IARC = International Agency for Research on Cancer; EPA = Environmental Protection Agency.

Contact:

Contact Phone:

This is the end of MSDS # AG-001