Safety Data Sheet

Issue Date: 20-Apr-2012 **Review Date:** 09-Oct-2019 **Version** 1

1. IDENTIFICATION

Product Identifier
Product Name **Autoguard Concentrate Antifreeze & Coolant**

Other means of identification
SDS # AG-036

Recommended use of the chemical and restrictions on use
Recommended Use Automotive Engine Antifreeze & Coolant

Details of the supplier of the safety data sheet
Warren Oil Company, LLC
2340 Highway 301, North
Dunn, NC 28334
910-892-6456

Emergency Telephone Number
Company Phone Number 1-800-428-9284
Emergency Telephone (24 hr) CHEMTREC 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS-US classification

Acute Tox. 4 (Oral) H302
STOT RE 2 H373

Full text of H-phrases: see Section 16

GHS-US Labeling
Hazard pictograms (GHS-US)

GHS07 **GHS08**

Signal word (GHS-US): Warning
Hazard statements (GHS-US):
H302 – Harmful if swallowed
H373 – May cause damage to organs (kidneys) through prolonged or repeated exposure (oral)

Precautionary statements (GHS-US):
P201 – Obtain special instructions before use
P202 – Do not handle until all safety precautions have been read and understood
P260 – Do not breathe mist, spray, vapors
P264 – Wash affected areas thoroughly after handling

P270 – Do not eat, drink or smoke when using this product
P280 – Wear personal protective equipment as required
P301+P310 – If swallowed: Immediately call doctor/physician or poison center
P301+P330+P331 – If swallowed: rinse mouth. Do NOT induce vomiting
P304+P340 – If inhaled: Remove person to fresh air and keep comfortable for breathing
P308+P313 – If exposed or concerned: Get medical advise/attention
P405 – Store locked up
P501 – Dispose of contents/container, in a safe manner, to appropriate waste disposal facility, in accordance with local/regional/national/international regulations.

Other hazards
No additional information available

Unknown acute toxicity (GHS-US): No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance
Not applicable

Mixture

Name	Mixture	%	GHS-US Classification
ethylene glycol	(CAS No.) 107-21-1	90 - 97	Acute Tox. 4 (Oral), H302
diethylene glycol	(CAS No.) 111-46-6	0.5 - 5	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
Water	(CAS No.) 7732-18-5	1 - 5	Not classified
Denatonium benzoate	(CAS No.) 3734-33-6	30 – 50 ppm	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335

Full text of hazard classes and H-statements: See Section 16

4. FIRST-AID MEASURES

Description of first aid measures

First-aid measures general: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek immediate medical advice. Allow the victim to rest. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

First-aid measures after skin contact: Remove contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Rinse immediately with plenty of water (for at least 15 minutes). Get medical advice/attention. Specific treatment (see supplemental first air instructions on this label).

First-aid measures after eye contact: Remove contact lenses, if present and easy to do. Continue rinsing. Rinse immediately with plenty of water for 15 minutes, lifting lower and upper lids. If eye irritation persists: Rinse immediately with plenty of water. Get medical advice/attention.

First-aid measures after ingestion: Obtain emergency medical attention. Rinse mouth. If the person is fully conscious, make him/her drink two glasses of water. Never give an unconscious person anything to drink. Do NOT induce vomiting. Call a POISON CENTER/doctor/ physician if you feel unwell. If medical advice is delayed, and if the person has swallowed a moderate volume of material (a few ounces), then give three to four ounces of hard liquor, such as whiskey. For children, give proportionally less liquor, according to weight.

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 serious 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.).

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 dehydrogenases, which effectively blocks the formation of toxic metabolites of ethylene glycol. It has been used to decrease the metabolic consequences of ethylene glycol poisoning before metabolic acidosis coma, seizures, and renal failure have occurred.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Water fog. Fine water spray. Foam. Carbon dioxide. Dry chemical powder. Sand.

Unsuitable Extinguishing Media: Do not use a heavy water stream; may spread fire.

Special hazards arising from the substance or mixture

Fire hazard: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

Reactivity: No dangerous reactions known under normal conditions of use.

Advice for firefighters

Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering 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 (includes fire-fighting helmet, coat, pants, boots and gloves).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Emergency procedures: Evacuate unnecessary personnel.

For emergency responders

Protective equipment: Equip cleanup crew with proper protection. Refer to Section 8.2.

Emergency procedures: Ventilate area.

Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

Methods and material for containment and cleaning up

Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

Reference to other sections

See Section 8. Exposure controls and personal protection.

7. HANDLING AND STORAGE

Precautions for safe handling

Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process areas to prevent formation of vapor.

Hygiene measures: Do not eat, drink or smoke when using this product. Wash affected areas thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage conditions: Keep only in the original container in a cool, well ventilated place away from: Heat sources. Keep container closed when not in use. Product may become solid at temperatures below -18 °C (0 °F). Do not store near food, foodstuffs, drugs or potable water supplies. Do not cut, drill, weld, use a blowtorch on, etc. containers even when empty.

Incompatible products: Keep away from strong acids, strong bases and oxidizing agents.

Incompatible materials: Sources of ignition.

Specific end use(s)

No additional information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

ethylene glycol (107-21-1)		
USA ACGIH	**Local Name**	**Ethylene glycol**
USA ACGIH	ACGIH TWA (mg/m³)	10 (mg/m³)
USA ACGIH	ACGIH TWA (ppm)	25 ppm (Vapor fraction)
USA ACGIH	ACGIS STEL (mg/m³)	10 mg/m³ (Inhalable fraction, Aerosol only)
USA ACGIH	ACGIH STEL (ppm)	50 ppm (Vapor fraction)
USA ACGIH	Remark (ACGIH)	Upper respiratory tract & eye irritant
diethylene glycol (111-46-6)		
Not applicable		
denatonium benzoate (3734-33-6)		
Not applicable		
water (7732-18-5)		
Not applicable		

Exposure controls

Personal protective equipment: Avoid all unnecessary exposure. Gloves. Safety glasses.

Hand protection: Wear protective gloves.

Eye protection: Chemical goggles or safety glasses.

Respiratory protection: Respiration protection not required in normal conditions.
If exposed to levels above exposure limits, wear appropriate respiratory protection.

Other information: Do not eat, drink or smoke during use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State:	Liquid
Color:	Green
Odor:	Mild
Odor threshold:	No data available
pH 50% water solution:	10.5 – 11
Relative evaporation rate (butylacetate=1):	Nil
Freezing point:	-18 °C (0 °F)
Boiling point:	158 °C (317 °F)
Flash point:	116 °C (241 °F)[100% Ethylene Glycol] *ASTM D56*
Auto-ignition temperature:	400 °C (752 °F)[100% Ethylene Glycol] *Literature*
Decomposition temperature:	No data available
Flammability (solid, gas):	No data available
Vapor pressure:	< 0.1 mm Hg @ 20 °C
Relative vapor density at 20°C:	No data available
Specific gravity:	1.12
Density:	1.12 kg/l (9.3 lbs/gal)
Solubility:	Water: Complete
Log Pow	No data available
Log Kow	No data available
Viscosity, kinematic:	No data available
Viscosity, dynamic:	No data available
Explosive limits:	3.2 – 15.3 vol %
Explosive properties:	No data available
Oxidizing properties:	No data available
Explosive limits:	3.2 – 15.3 vol %

Other information

VOC content: 0.00%

10. STABILITY AND REACTIVITY

Reactivity

No dangerous reactions known under normal conditions of use.

Chemical stability
Stable.

Possibility of hazardous reactions
Hazardous polymerization will occur.

Conditions to Avoid
Keep away from any flames or sparking source. Extremely high or low temperatures.

Incompatible Materials
Keep away from strong acids, strong bases and oxidizing agents.

Hazardous Decomposition Products
Carbon dioxide. Carbon monoxide. Fume, Alcohols. Aldehydes. Ethers.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity: Not classified

ethylene glycol (107-21-1)	
LD50 oral rat	7712 mg/kg bodyweight (according to BASF-internal standards, Rat, Male/female, Experimental value)
LC50 inhalation rat (mg/l)	>2.5 mg/l (6 h Rat, Male/female, Experimental value)
ATE US oral	500 mg/kg bodyweight
diethylene glycol (111-46-6)	
LD50 oral rat	19,600 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male, Experimental value)
LD50 dermal rabbit	11,890 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	>4.6 mg/l (Other, 4 h, Rat, Weight of evidence)
ATE US (oral)	500 mg/kg bodyweight
ATE US (dermal)	11,890 mg/kg bodyweight
denatonium benzoate (3734-33-6)	
LD50 oral rat	584 mg/kg (Rat, Literature study)
LD50 dermal rabbit	> 2,000 mg/kg (Rabbit, Literature study)
ATE US (oral)	584 mg/kg bodyweight

Skin corrosion/irritation: Not classified

Serious eye damage/irritation: Not classified

Respiratory or skin sensitization: Not classified

Germ cell mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive toxicity: Not classified

Specific target organ toxicity (single version): Not classified

Specific target organ toxicity (repeated exposure): May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).

Aspiration hazard: Not classified

Potential Adverse human health effects and symptoms: Based on available data, the classification criteria are not met. Harmful if swallowed.

Symptoms/injuries after skin contact: Causes skin irritation.

Symptoms/injuries after eye contact: Causes serious 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.).

12. ECOLOGICAL INFORMATION

Toxicity

ethylene glycol (107-21-1)	
LD50 fish 1	40,761 mg/l (96 h; Pimephales promelas ; Static system)
EC50 Daphnia 1	> 10,000 mg/l (24 h; Daphnia magna)
diethylene glycol (111-46-6)	
LC50 fish 1	> 5,000 ppm (24 h; Carassius auratus)
EC50 Daphnia 1	> 10,000 mg/l 24 h; Daphnia magna)
LC50 fish 2	75,200.00 mg/l (Other, 96 h, Pimephales promelas, Flow-through system, Experimental value)
EC50 Daphnia 2	>10,000.00 mg/l (DIN 38412-11, Daphnia magna, Static system, Fresh water, Experimental value)
Denatonium benzoate (3734-33-6)	
LC50 fish 1	> 1,000 mg/l 96h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 1	13.00 mg/l (48 h; Daphnia magna)

Persistence and degradability:

ethylene glycol (107-21-1)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.47 g O_2/g substance
Chemical oxygen demand (COD)	1.24 g O_2/g substance
ThOD	1.29 g O_2/g substance
BOD (% of ThOD)	0.36% ThOD
Diethylene glycol (111-46-6)	
Persistence and degradability	Biodegradable in the soil. Biodegradable in water.
Biochemical oxygen demand (BOD)	0.02 g O_2/g substance
Chemical oxygen demand (COD)	1.51 g O_2/g substance
ThOD	1.51 g O_2/g substance
BOD (% of ThOD)	0.02% of ThOD
denatonium benzoate (3734-33-6)	
Persistence and degradability	Biodegradability in water; not data available. No (test) data on mobility of the substance available.

Bioaccumulative potential:

ethylene glycol (107-21-1)	
BCF fish 1	10.00 (72 h; Leuciscus idus)
BCF other aquatic organisms 1	0.21 – 0.6 (Procambarus sp.; Chronic)
BCF other aquatic organisms 2	190.00 (24 h; Algae)
Log Pow	-1.34 (Experimental value)
Bioaccumulative potential	Not bioaccumulative.

diethylene glycol (111-46-6)	
BCF fish 1	100.00 (Other, 3 day(s), Leuciscus melanotus, Static system, Fresh water, Experimental value)
Log Pow	-1.98 (Calculated, Other)
Bioaccumulative potential	Bioaccumulation: not applicable.
denatonium benzoate (3734-33-6)	
Low Pow	1.78 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Mobility in soil:

ethylene glycol (107-21-1)	
Surface tension	48.00 mN/m (20 °C / 68 °F)
Ecology – soil	No (test) data on mobility of the substance available.
diethylene glycol (111-46-6)	
Surface tension	0.05 N/m
Log Koc	0.00 (log Koc, SRC PCKOCWIN v 1.66, Calculated value)
Ecology – soil	Highly mobile in soil.
denatonium benzoate (3734-33-6)	
Ecology - soil	No (test) data on mobility of the substance available.

Other adverse effects:

Effect on ozone layer: No known effect on the ozone layer.

Other information: Avoid release to the environment.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Product/Packaging disposal recommendations: Dispose of contents/container, in a safe manner, to appropriate waste disposal facility, in accordance with local/regional/national/international regulations.

Ecology – waste materials: Avoid release to the environment.

14. TRANSPORT INFORMATION

In accordance with DOT

Transport document description: UN3082 Environmentally hazardous substances, liquid, n.o.s., 9, III
UN-No.(DOT) : 3082
DOT NA no. : UN3082
Proper Shipping Name (DOT): Environmentally hazardous substances, liquid, n.o.s.
Ethylene Glycol.

Department of Transportation (DOT) Hazard Classes: 9 – Class 9 – Miscellaneous hazardous material 49 CFR 173.140
Packing Group (DOT): III – Minor Danger
Hazard labels (DOT): 9 – Class 9 (Miscellaneous dangerous materials)

DOT Symbols:	G – Identifies PSN requiring a technical name
Packing Group (DOT):	III – Minor Danger
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
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27):	No limit
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75):	No limit
DOT Vessel Stowage Location:	A – The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel.
Other information:	No supplementary information available.

Transportation of Dangerous Goods

Refer to current TDG Canada for further Canadian regulations.

Transport by sea

UN-No. (IMDG): Not regulated by IMDG (in quantities under 5,000 lbs. in any one inner package).

Air transport

UN-No. (IATA): Not regulated by IATA (in quantities under 5,000 lbs. in any one inner package).

15. REGULATORY INFORMATION

US Federal Regulations

Autoguard Concentrate Antifreeze & Coolant	
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 States TSCA (Toxic Substances Control Act) inventory Listed on United States SARA Section 313	
RQ (Reportable quantity, Section 304 of EPA’s List of Lists)	5000 lb(s)
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard Ethylene glycol is subject to Tier I and/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 States TSCA (Toxic Substances Control Act) inventory	
Denatonium benzoate (3734-33-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

International regulations:

CANADA

WHMIS Classification

This SDS has been prepared according to the criteria of the Hazardous Products Regulations (HPR) (WHMIS 2015) and the SDS contains all of the information required by the HPR.
Applicable GHS information is listed in section 2.2 of this SDS.

EU-Regulations
No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]
Not classified

National Regulations

Autoguard Concentrate Antifreeze & Coolant
DSL (Canada): The intentional ingredients of this product are listed ECL (South Korea): The intentional ingredients of this product are listed EINECES (Europe): The intentional ingredients of this product are listed ENCS (Japan): The intentional ingredients of this product are listed

US State regulations

WARNING: This product can expose you to chemicals including ethylene glycol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov .

ethylene glycol (107-21-1)				
U.S. – California – Proposition 65 – Carcinogens List	U.S. – California – Proposition 65 - Developmental Toxicity	U.S. – California – Proposition 65 - Reproductive Toxicity - Female	U.S. – California – Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	Yes	No	No	

ethylene glycol (107-21-1)
U.S. – Massachusetts – Right To Know List U.S. – New Jersey – Right to Know Hazardous Substance List U.S. – Pennsylvania – RTK (Right to Know) List

16. OTHER INFORMATION

Full text of H-phrases:

H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H373	May cause damage to organs through prolonged or repeated exposure

NFPA health hazard: 1 –Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard: 1 – Must be preheated before ignition can occur.

NFPA reactivity 0 – Normally stable, even under fire exposure conditions, and are not reactive with water.

HMIS III Rating:

Health	2 Moderate Hazard – Temporary or minor injury may occur
Flammability	1 Slight Hazard
Physical	0 Minimal Hazard
Personal Protection	B

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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet