Safety Data Sheet

Issue Date: 20-Apr-2012 **Review Date:** 10-Oct-2019 **Version** 1

1. IDENTIFICATION

Product Identifier
Product Name **Autoguard Universal Full Strength Extended Life Antifreeze**

Other means of identification
SDS # AG-006

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

Details of the supplier of the safety data sheet

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

2. HAZARDS IDENTIFICATION

GHS-US Classification

Acute Tox. 4 (Oral) H302
Repr. 2 H361
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
H361 – Suspected of damaging fertility or the unborn child.
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 advice/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	Product Identifier	% by wt	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
Potassium 2-ethylhexanoate	(CAS No.) 3164-85-0	1 - 5	Repr. 2, H361
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 aid 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 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

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: The lethal dose in humans is estimated to be 100 mL (3 oz.). Swallowing a small quantity of this material will result in serious health hazard.

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. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. 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 area 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	ACGIH 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
Denatonium benzoate (3734-33-6)		
Not applicable		
Diethylene glycol (111-46-6)		
Not applicable		

Exposure controls

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

Individual protection measures, such as personal protective equipment

Hand protection: Wear protective gloves.

Eye protection: Chemical goggles or safety glasses.

Respiratory protection: 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:	Slightly yellow to green
Odor:	Mild
Odor threshold:	No data available
pH 50% water solution:	8
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 (9.34 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 properties:	Not applicable
Oxidizing properties:	Not applicable
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 not 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/4h (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)
LD50 dermal rabbit	> 2,000 mg/kg (Rabbit)
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: Suspected of damaging fertility or the unborn child.

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: The lethal dose in humans is estimated to be 100 mL (3 oz.). Swallowing a small quantity of this material will result in serious health hazard.

12. ECOLOGICAL INFORMATION

Toxicity:

Denatonium benzoate (3734-33-6)	
LC50 fish 1	>1,000.00 mg/l (96 h, Salmo gairdneri, Literature study)
EC50 Daphnia 1	13.00 mg/l (48 h; Daphnia magna, Literature study)
Ethylene glycol (107-21-1)	
LC50 fish 1	40,761 mg/l (96 h, Salmo gairdneri, Literature study)
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 mg/l (Other, 96 h, Pimephales promelas, Flow-through system, Experimental value)
EC50 Daphnia 2	>10,000.00 mg/l (DIN 38412-11, 24 h, Daphnia magna, Static system, Fresh water, Experimental value)

Persistence and degradability:

Ethylene glycol (107-21-1)	
Persistence and degradability	Biodegradable in water. Biodegradable in the soil.
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%
Diethylene glycol (111-46-6)	
Persistence and degradability	Biodegradable in water. Biodegradable in the soil.
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)	0.02 %
Denatonium benzoate (3734-33-6)	
Persistence and degradability	Biodegradability in water: no data available. No (test) data on mobility of the substance.

Bioaccumulative potential:

Ethlene glycol (107-21-1)	
BCF fish 1	10 (72 h; Leuciscus idus)
BCF other aquatic organisms 1	0.21 – 0.6 (Procambarus sp.; Chronic)
BCF other aquatic organisms 2	190 (24 h; Algae)
Log Pow	-1.34 (Experimental value)
Bioaccumulative potential	Not bioaccumulative
Denatonium glycol (3734-33-6)	
Log Pow	1.78 (Established value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
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	Not bioaccumulative

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

Waste disposal recommendations: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or 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) 9 – Class 9 – Miscellaneous hazardous material 49 CFR 173.140
Hazard Classes: III – Minor Danger

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/trail (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

Auto guard Universal Full Strength Extended Life Antifreeze

EPA TSCA Regulatory Flag	Toxic Substance Control Act (TSCA): The international 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	
EPA TSCA Regulatory Flag	T – T – indicates a substance that is the subject of a Section 4 test rule under TSCA
CERCLA RQ	5000 lb(s)
SARA Section 313 – Emission Reporting	Refer to Section 2 for the OSHA hazard classification Ethylene glycol is subject to Tier I and/or Tier II annual inventory reporting.

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
potassium 2-ethylhexanoate (3164-85-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Water (7732-18-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

International regulations:

CANADA **Autoguard Universal Full Strength Extended Life Antifreeze**	
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.

International regulations:

CANADA **Autoguard Universal Full Strength Extended Life Antifreeze**	
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

National Regulations
Autoguard Universal Full Strength Extended Life Antifreeze

Lubriguard NOAT 50/50 Prediluted Antifreeze & Coolant

DSL (Canada): The intentional ingredients of this product are listed.
EINECS (Europe): The intentional ingredients of this product are listed.
ECL (South Korea): The international ingredients of this product are listed.
ENCS (Japan): The international 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 – Development 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

Diethylene glycol (111-46-6)
U.S. – Pennsylvania – RTK (Right to Know) Environmental Hazard 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 – Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard: 1 – Materials that must be preheated before ignition can occur/

NFPA reactivity 0 – Material that in themselves are normally stable, even under fire conditions

HMIS III Rating:

Health 2 Moderate Hazard – Temporary or minor injury may occur

Flammability 1 Slight Hazard

Physical 0 Minimal Hazard

Personal Protection B

Issue Date: 20-Apr-2012
Review Date: 10-Oct-2019

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