



# SAFETY DATA SHEET

Issuing Date 11-Dec-2012

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Revision Number 0

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

### GHS product identifier

**Product Name** Antifreeze

### Other means of identification

**UN-Number** UN3082

**Synonyms** Automotive antifreeze, coolant

### Recommended use of the chemical and restrictions on use

**Recommended Use** Automotive antifreeze, coolant

**Uses advised against** No information available

### Supplier's details

#### **Supplier Address**

Complex Chemical Co.  
177 Complex Chemical  
Tallulah, La. 71282  
TEL: 318-574-0382

### Emergency telephone number

**Emergency Telephone Number** 800-825-9720

## 2. HAZARDS IDENTIFICATION

### Classification

This chemical is considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200)

Acute Oral Toxicity	Category 4
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### GHS Label elements, including precautionary statements

#### Emergency Overview

<b>Signal Word</b> <b>Hazard Statements</b> • Harmful if swallowed	<b>Warning</b>
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**Appearance** Green**Physical State** Liquid.**Odor** Characteristic**Precautionary Statements****Prevention**

- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product

**General Advice**

- None

**Ingestion**

- IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
- Rinse mouth

**Storage**

- None

**Disposal**

- Dispose of contents/container to an approved waste disposal plant

**Hazard Not Otherwise Classified (HNOC)**

Not applicable

**Other information**

No information available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Synonyms**

Automotive antifreeze, coolant

Chemical Name	CAS-No	Weight %	Trade secret
Ethylene glycol	107-21-1	60-100	*
Diethylene glycol	111-46-6	3-7	*

*\*The exact percentage (concentration) of composition has been withheld as a trade secret.*

### 4. FIRST AID MEASURES

**Description of necessary first-aid measures****Eye Contact**

Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing. If symptoms persist, call a physician.

**Skin Contact**

Wash off immediately with plenty of water. Get medical attention immediately if symptoms occur.

**Inhalation**

Move to fresh air. Get medical attention immediately if symptoms occur.

**Ingestion**

Call a POISON CENTER or doctor/physician if exposed or you feel unwell. Rinse mouth.

**Most important symptoms/effects, acute and delayed**

**Most Important Symptoms/Effects** Nausea. Central nervous system depression.

**Indication of immediate medical attention and special treatment needed, if necessary****Notes to Physician**

IMMEDIATE TREATMENT IS EXTREMELY IMPORTANT! Ethylene Glycol (EG) and Diethylene Glycol (DEG) intoxication may initially produce behavioral changes, drowsiness, vomiting, diarrhea, thirst, and convulsions. EG and DEG are nephrotoxic. End stages of poisoning may include renal damage or failure with acidosis. Supportive measures, supplemented with hemodialysis if indicated, may limit the progression and severity of toxic effects. May cause cardiopulmonary effects. For ETHYLENE GLYCOL POISONING, intravenous ethanol is a recognized antidotal treatment; other antidotal treatments also exist for ethylene glycol poisoning.

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** None

**Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors.

**Explosion Data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal Precautions** Ensure adequate ventilation. Avoid contact with skin, eyes and clothing.

**Environmental Precautions**

**Environmental Precautions** Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. Prevent spreading of vapors through sewers, ventilation systems and confined areas.

**Methods and materials for containment and cleaning up**

**Methods for Containment** Stop leak if you can do it without risk. Dike far ahead of liquid spill for later disposal.

**Methods for Cleaning Up** Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Handling** Do not ingest. Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists. Ensure adequate ventilation. Wash thoroughly after handling.

**Conditions for safe storage, including any incompatibilities**

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place.

**Incompatible Products** Strong oxidizing agents. Strong acids.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Control parameters****Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethylene glycol 107-21-1	Ceiling: 100 mg/m <sup>3</sup> aerosol only	(vacated) Ceiling: 50 ppm (vacated) Ceiling: 125 mg/m <sup>3</sup>	-

**Appropriate engineering controls**

**Engineering Measures** Showers  
Eyewash stations  
Ventilation systems

**Individual protection measures, such as personal protective equipment**

**Eye/Face Protection** Safety glasses with side-shields. If splashes are likely to occur, wear: Goggles.  
**Skin and Body Protection** Impervious clothing. Impervious gloves.  
**Respiratory Protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**Hygiene Measures** When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties**

**Physical State** Liquid  
**Odor** Characteristic  
**Appearance** Green  
**Odor Threshold** No information available

Property	Values	Remarks/ - Method
<b>pH</b>	10.5	None known
<b>Melting Point/Range</b>	No data available	None known
<b>Boiling Point/Boiling Range</b>	203 °C	None known
<b>Flash Point</b>	203 °C	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limits in Air</b>		
upper flammability limit	No data available	
lower flammability limit	No data available	
<b>Vapor Pressure</b>	No data available	None known
<b>Vapor Density</b>	No data available	None known
<b>Relative Density</b>	No data available	None known
<b>Specific Gravity</b>	1.114	None known
<b>Water Solubility</b>	Appreciable	None known
<b>Solubility in other solvents</b>	No data available	None known
<b>Partition coefficient: n-octanol/water</b>	No data available	None known
<b>Autoignition Temperature</b>	No data available	None known
<b>Decomposition Temperature</b>	No data available	None known
<b>Viscosity</b>	No data available	None known

**Flammable Properties** Not flammable

**Explosive Properties** No data available  
**Oxidizing Properties** No data available

**Other information**

**VOC Content (%)** None

## 10. STABILITY AND REACTIVITY

**Reactivity**

No data available.

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

None under normal processing.

**Conditions to avoid**

High temperatures.

**Incompatible materials**

Strong oxidizing agents. Strong acids.

**Hazardous decomposition products**

Carbon oxides. Ketones. Aldehydes.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure****Product Information**

<b>Inhalation</b>	May cause irritation of respiratory tract.
<b>Eye Contact</b>	May cause irritation.
<b>Skin Contact</b>	May cause irritation.
<b>Ingestion</b>	Harmful if swallowed. Ingestion may cause irritation to mucous membranes. Orally, humans are more sensitive to ethylene glycol than rodents. The reported lethal dose range for an adult human is 1-2 ml/kg or 1/4 to 1/2 cup.

**Component Information**

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethylene glycol	4000 mg/kg ( Rat )	9530 µL/kg ( Rabbit )	-
Diethylene glycol	= 12565 mg/kg ( Rat )	= 11890 mg/kg ( Rabbit )	-
Water	90 mL/kg ( Rat )	-	-

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Sensitization** No information available.  
**Mutagenic Effects** No information available.

<b>Carcinogenicity</b>	Contains no ingredient listed as a carcinogen.
<b>Reproductive Toxicity</b>	No information available.
<b>Developmental Toxicity</b>	Oral exposure of pregnant rats and mice to ethylene glycol has produced birth defects in offspring.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Target Organ Effects</b>	Kidney. Central nervous system (CNS).
<b>Aspiration Hazard</b>	No information available.

**Numerical measures of toxicity • - Product**

*The following values are calculated based on chapter 3.1 of the GHS document:*

<b>LD50 Oral</b>	1667 mg/kg; Acute toxicity estimate
<b>LD50 Dermal</b>	178350 mg/kg; Acute toxicity estimate

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Ethylene glycol	EC50 96 h: 6500 - 13000 mg/L (Pseudokirchneriella subcapitata)	LC50 96 h: 14 - 18 mL/L static (Oncorhynchus mykiss) LC50 96 h: 40000 - 60000 mg/L static (Pimephales promelas) LC50 96 h: = 16000 mg/L static (Poecilia reticulata) LC50 96 h: = 27540 mg/L static (Lepomis macrochirus) LC50 96 h: = 40761 mg/L static (Oncorhynchus mykiss) LC50 96 h: = 41000 mg/L (Oncorhynchus mykiss)	EC50 = 10000 mg/L 16 h EC50 = 620 mg/L 30 min EC50 = 620.0 mg/L 30 min	EC50 48 h: = 46300 mg/L (Daphnia magna)
Diethylene glycol		LC50 96 h: = 75200 mg/L flow-through (Pimephales promelas)	EC50 = 29228 mg/L 15 min	EC50 48 h: = 84000 mg/L (Daphnia magna)

**Persistence and Degradability** No information available.

**Bioaccumulation** No information available.

Chemical Name	Log Pow
Ethylene glycol	-1.93
Diethylene glycol	-1.98

**Other Adverse Effects**

No information available.

**13. DISPOSAL CONSIDERATIONS****Waste Disposal Methods**

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

**Contaminated Packaging**

Do not re-use empty containers.

**14. TRANSPORT INFORMATION**

**Note:** Product may be shipped as a Limited Quantity - DOT Ground. This product contains hazardous materials with reportable quantities as listed in Section 15. Based on net weight of product, the shipping description and label may need to be marked with "RQ."

**DOT**

**UN-Number** UN3082  
**Proper shipping name** Environmentally hazardous substances, liquid, n.o.s.  
**Hazard Class** 9  
**Packing Group** III  
**Reportable Quantity (RQ)** Ethylene glycol: RQ kg= 9080.00  
**Description** UN3082, Environmentally hazardous substances, liquid, n.o.s. (Ethylene Glycol, Diethylene Glycol), 9, III, RQ  
**Emergency Response Guide Number** 171

**TDG** Not regulated

**MEX** Not regulated

**ICAO** Not regulated

**IATA** Not regulated

**IMDG/IMO** Not regulated

**RID** Not regulated

**ADR** Not regulated

**ADN** Not regulated

## 15. REGULATORY INFORMATION

**International Inventories**

**TSCA** Complies  
**DSL** Complies

**Legend**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**U.S. Federal Regulations**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Ethylene glycol	107-21-1	92	1.0

**SARA 311/312 Hazard Categories**

**Acute Health Hazard** Yes  
**Chronic Health Hazard** No  
**Fire Hazard** No  
**Sudden Release of Pressure Hazard** No  
**Reactive Hazard** No

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Ethylene glycol	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

**U.S. State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Ethylene glycol	X	X	X	X	X
Diethylene glycol			X		X

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**16. OTHER INFORMATION**

<b>NFPA</b>	Health Hazard 1	Flammability 0	Instability 0	Physical and Chemical Hazards -
<b>HMIS</b>	Health Hazard 1	Flammability 0	Physical Hazard 0	Personal Protection X

**Prepared By**

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**Revision Note**

Initial Release.

**General Disclaimer**

The information provided on this MSDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

**End of Safety Data Sheet**