SAFETY DATA SHEET

Issuing Date 11-Dec-2012 **Revision Date** 11-Dec-2012 **Revision Number** 0

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

GHS product identifier

Product Name **Antifreeze ELC**

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

GHS Label elements, including precautionary statements

Emergency Overview

Signal Word **Warning**

Hazard Statements
• Harmful if swallowed

Appearance Red **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/m³ aerosol only	(vacated) Ceiling: 50 ppm (vacated) Ceiling: 125 mg/m³	-

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
Appearance Red
Odor Characteristic
Odor Threshold No information available

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

Inhalation May cause irritation of respiratory tract.
Eye Contact May cause irritation.
Skin Contact May cause irritation.
Ingestion 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.

Carcinogenicity Contains no ingredient listed as a carcinogen.

Reproductive Toxicity No information available.
Developmental Toxicity Oral exposure of pregnant rats and mice to ethylene glycol has producted birth defects in offspring.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organ Effects Kidney. Central nervous system (CNS).
Aspiration Hazard No information available.

Numerical measures of toxicity • - Product
The following values are calculated based on chapter 3.1 of the GHS document:
LD50 Oral 1667 mg/kg; Acute toxicity estimate
LD50 Dermal 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

NFPA	**Health Hazard** 1	**Flammability** 0	**Instability** 0	**Physical and Chemical Hazards** -
HMIS	**Health Hazard** 1	**Flammability** 0	**Physical Hazard** 0	**Personal Protection** X

Prepared By
Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

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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