Safety Data Sheet

Issue Date: 03-Feb-2012 **Revision Date:** 28-Aug-2016 **Version 2**

1. IDENTIFICATION

Product Identifier
Product Name **STARFIRE P-fleet Extreme Heavy Duty ELC**

Other means of identification
SDS # CG-003

Synonyms Ethylene Glycol; 1,2-Ethanediol; Ethylene Alcohol.
UN/ID No UN3082

Recommended use of the chemical and restrictions on use
Recommended Use Anti-freeze.

Details of the supplier of the safety data sheet

Supplier Address	**Manufacturer Address**
Coolants Plus	Coolants Plus
2570 Van Hook Ave	11210 Solomon Road
Hamilton, Ohio 45015	Troy, IN 47588

Emergency Telephone Number
Company Phone Number 1-800-489-2306
Emergency Telephone (24 hr) Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Appearance Gold, Red, Orange, Clear or Green liquid **Physical State** Liquid **Odor** Mild

Classification

Specific target organ toxicity (repeated exposure)	Category 2

Signal Word
Warning

Hazard Statements
May cause damage to organs through prolonged or repeated exposure

Precautionary Statements - Prevention
Do not breathe dust/fume/gas/mist/vapors/spray

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms Ethylene Glycol; 1,2-Ethanediol; Ethylene Alcohol.

Chemical Name	CAS No	Weight-%
Ethylene glycol	107-21-1	42-98
Proprietary Inhibitors	Proprietary	Proprietary
Potassium hydroxide	1310-58-3	0.2

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek medical attention.

Skin Contact Wash with soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation persists, call a physician.

Inhalation Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.

Ingestion Call a physician immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

Most important symptoms and effects

Symptoms May cause skin and eye irritation. May cause irritation to the mucous membranes and upper respiratory tract. Ingestion may cause nausea, vomiting, dizziness, and headache.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Persistent eye, skin, and respiratory disorders may be aggravated by exposure to this product. Persons with pre-existing kidney or liver disease may be at an increased risk from exposure to this material. Give sodium bicarbonate intravenously to treat acidosis. Urinalysis may show low specific gravity, proteinuria, pyuria, cylindruria, hematuria, calcium oxide, and hippuric acid crystals. Ethanol can be used in antidotal treatment but monitor blood glucose when administering ethanol because it can cause hypoglycemia. Consider infusion of a diuretic such as mannitol to help prevent or control brain edema and hemodialysis to remove ethylene glycol from circulation.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Foam. Dry chemical. Carbon dioxide (CO2).

Unsuitable Extinguishing Media Water or foam may cause frothing. Do not scatter spilled material with high pressure water streams.

Specific Hazards Arising from the Chemical

Toxic products of combustion. Collect contaminated fire extinguishing water separately. Do not allow it to enter drains or surface water.

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. Use water spray to keep fire-exposed containers cool. Water spray will also reduce fume and irritant gases.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Ventilate affected area.

Environmental Precautions Do not allow into any sewer, on the ground or into any body of water.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Soak up with inert absorbent material. Recover free liquid. Discard any product, residue, disposable container or liner in full compliance with federal, state, and local regulations. US regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800)-424-8802.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Protect container from physical damage. Emptied container retains product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed. Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials.

Incompatible Materials Strong oxidizing agents. Reacts violently with chlorosulfonic acid, oleum, sulfuric acid, and perchloric acid. Causes ignition at room temperature with chromium trioxide, potassium permanganate and sodium peroxide. Also avoid contact with oxidizers such as chlorates, nitrates, peroxides, etc.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethylene glycol 107-21-1	Ceiling: 100 mg/m^3 aerosol only	(vacated) Ceiling: 50 ppm (vacated) Ceiling: 125 mg/m^3	-
Potassium hydroxide 1310-58-3	Ceiling: 2 mg/m^3	(vacated) Ceiling: 2 mg/m^3	Ceiling: 2 mg/m^3

Appropriate engineering controls

Engineering Controls Apply technical measures to comply with the occupational exposure limits. Ventilation systems. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear safety glasses with side shields (or goggles).

Skin and Body Protection Chemical resistant protective gloves. If potential for significant exposure to liquid exists, use full protective clothing and chemical boots.

Respiratory Protection No respiratory protection is necessary during normal use conditions. In the case of insufficient ventilation or if exposure limits are exceeded, use a suitable NIOSH/MSHA respiratory device.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid		
Appearance	Clear Dyed liquid	**Odor**	Mild
Color	Gold, Red, Orange, Clear or Green	**Odor Threshold**	Not determined

Property	**Values**	**Remarks • Method**
pH	Not determined	
Melting Point/Freezing Point	Not available	
Boiling Point/Boiling Range	163-171 °C / 325-340 °F	
Flash Point	121-123 °C / 250-254 °F	TOC
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	n/a-liquid	
Upper Flammability Limits	15.3	
Lower Flammability Limit	3.2	
Vapor Pressure	Not available	
Vapor Density	Not available	
Specific Gravity	1.115-1.133	
Water Solubility	Completely soluble	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	398 °C / 748 °F	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not available	
Dynamic Viscosity	Not available	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid
Heat, flames, ignition sources and incompatibles.

Incompatible Materials
Strong oxidizing agents. Reacts violently with chlorosulfonic acid, oleum, sulfuric acid, and perchloric acid. Causes ignition at room temperature with chromium trioxide, potassium permanganate and sodium peroxide. Also avoid contact with oxidizers such as chlorates, nitrates, peroxides, etc.

Hazardous Decomposition Products
Carbon monoxide. Carbon dioxide (CO2). Acrid smoke and fumes emitted if heated to decomposition.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Avoid contact with eyes.

Skin Contact Avoid contact with skin.

Inhalation Avoid breathing vapors or mists.

Ingestion Do not taste or swallow.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ethylene glycol 107-21-1	= 4000 mg/kg (Rat)	= 9530 µL/kg (Rabbit)	-
Potassium hydroxide 1310-58-3	= 214 mg/kg (Rat)	-	-

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Numerical measures of toxicity
Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity
The LC50/96 hour values for fish are over 100 mg/L.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea

Ethylene glycol 107-21-1	6500 - 13000: 96 h Pseudokirchneriella subcapitata mg/L EC50	41000: 96 h Oncorhynchus mykiss mg/L LC50 14 - 18: 96 h Oncorhynchus mykiss mL/L LC50 static 27540: 96 h Lepomis macrochirus mg/L LC50 static 40761: 96 h Oncorhynchus mykiss mg/L LC50 static 40000 - 60000: 96 h Pimephales promelas mg/L LC50 static 16000: 96 h Poecilia reticulata mg/L LC50 static	EC50 = 10000 mg/L 16 h EC50 = 620 mg/L 30 min EC50 = 620.0 mg/L 30 min	46300: 48 h Daphnia magna mg/L EC50
Potassium hydroxide 1310-58-3		80: 96 h Gambusia affinis mg/L LC50 static		

Persistence/Degradability

When released into the soil, this material is expected to readily biodegrade. It also has the potential to leach into the groundwater. When released into water this material is expected to readily biodegrade. In water, this material is expected to have a half-life between 1 and 10 days.

Bioaccumulation

This material is not expected to significantly bioaccumulate.

Mobility

Chemical Name	Partition Coefficient
Ethylene glycol 107-21-1	-1.93
Potassium hydroxide 1310-58-3	0.83

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
Potassium hydroxide 1310-58-3	Toxic Corrosive

14. TRANSPORT INFORMATION

Note Regulated only in packages that contain 5000 lbs or greater of ethylene glycol. DOT information must be accompanied by the "RQ" notation.

DOT

UN/ID No UN3082

Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s. (Ethylene glycol)
Hazard Class	9
Packing Group	III
Reportable Quantity (RQ)	5000 lbs

IATA Not regulated

IMDG Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Listed

Legend:
TSCA *- United States Toxic Substances Control Act Section 8(b) Inventory*

US Federal Regulations

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ethylene glycol 107-21-1	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ
Potassium hydroxide 1310-58-3	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

SARA 311/312 Hazard Categories

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

SARA 313

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Ethylene glycol - 107-21-1	107-21-1	42-98	1.0

CWA (Clean Water Act)

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Potassium hydroxide 1310-58-3 (0.2)	1000 lb			X

US State Regulations

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Ethylene glycol 107-21-1	X	X	X

Potassium hydroxide 1310-58-3	X	X	X

16. OTHER INFORMATION

NFPA	**Health Hazards**	**Flammability**	**Instability**	**Special Hazards**
	1	1	0	Not determined
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards**	**Personal Protection**
	Not determined	Not determined	Not determined	Not determined

Issue Date: 03-Feb-2012
Revision Date: 28-Aug-2014
Revision Note: Company name change

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

COOLANTS PLUS INC®