



Safety Data Sheet

Issue Date: 03-Feb-2012

Revision Date: 28-Aug-2016

Version 2

1. IDENTIFICATION

Product Identifier

Product Name STARFIRE All Makes All Models

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 2570 Van Hook Ave Hamilton, Ohio 45015 | Coolants Plus 11210 Solomon Road 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 | Odor | Mild |
| Appearance | Clear Dyed liquid | Odor Threshold | Not determined |
| Color | Gold, Red, Orange, Clear or Green | | |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|------------------------------|-------------------------|-------------------------|
| 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

| | | | | |
|--------------------|-----------------------|---------------------|-------------------------|----------------------------|
| <u>NFPA</u> | Health Hazards | Flammability | Instability | Special Hazards |
| | 1 | 1 | 0 | Not determined |
| <u>HMIS</u> | Health Hazards | Flammability | Physical Hazards | Personal Protection |
| | Not determined | Not determined | Not determined | Not determined |

Issue Date: 03-Feb-2012
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 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

