1. IDENTIFICATION

Product Identifier
Antifreeze Coolant Full Strength or 50/50

Product Name
PolyFreeze, PowerGard Green, Red or Gold

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
ORG Chem Group LLC
2406 Lynch Road
Evansville, IN 47711

Manufacturer Address
ORG Chem Group LLC
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 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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol</td>
<td>107-21-1</td>
<td>42-98</td>
</tr>
<tr>
<td>Proprietary Inhibitors</td>
<td>Proprietary</td>
<td>Proprietary</td>
</tr>
<tr>
<td>Potassium hydroxide</td>
<td>1310-58-3</td>
<td>0.2</td>
</tr>
</tbody>
</table>

*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

<table>
<thead>
<tr>
<th>Personal Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ventilate affected area.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Environmental Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do not allow into any sewer, on the ground or into any body of water.</td>
</tr>
</tbody>
</table>

Methods and material for containment and cleaning up

<table>
<thead>
<tr>
<th>Methods for Containment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevent further leakage or spillage if safe to do so.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Methods for Clean-Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling

<table>
<thead>
<tr>
<th>Advice on Safe Handling</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>

Conditions for safe storage, including any incompatibilities

<table>
<thead>
<tr>
<th>Storage Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Incompatible Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol</td>
<td>Ceiling: 100 mg/m³ aerosol only (vacated) ceiling: 50 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>107-21-1</td>
<td>(vacated) Ceiling: 125 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potassium hydroxide</td>
<td>Ceiling: 2 mg/m³</td>
<td>(vacated) Ceiling: 2 mg/m³</td>
<td></td>
</tr>
<tr>
<td>1310-58-3</td>
<td></td>
<td>Ceiling: 2 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Gold, Red or Green liquid</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Gold, Red or Green</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Mild</td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>Not available</td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>163-171 °C / 325-340 °F</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>121-123 °C / 250-254 °F</td>
<td>TOC</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>n/a-liquid</td>
<td></td>
</tr>
<tr>
<td>Upper Flammability Limits</td>
<td>15.3</td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not available</td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not available</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.115-1.133</td>
<td></td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Completely soluble</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>398 °C / 748 °F</td>
<td></td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Kinematic Viscosity</td>
<td>Not available</td>
<td></td>
</tr>
<tr>
<td>Dynamic Viscosity</td>
<td>Not available</td>
<td></td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Not determined</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol</td>
<td>= 4000 mg/kg (Rat)</td>
<td>= 9530 µL/kg (Rabbit)</td>
<td>-</td>
</tr>
<tr>
<td>107-21-1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potassium hydroxide</td>
<td>= 214 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1310-58-3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Toxicity to microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Partition Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol 107-21-1</td>
<td>-1.93</td>
</tr>
<tr>
<td>Potassium hydroxide 1310-58-3</td>
<td>0.83</td>
</tr>
</tbody>
</table>

### 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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium hydroxide 1310-58-3</td>
<td>Toxic</td>
</tr>
</tbody>
</table>

### 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**

<table>
<thead>
<tr>
<th>UN/ID No</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN3082</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA/SARA RQ</th>
<th>Reportable Quantity (RQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol 107-21-1</td>
<td>5000 lb</td>
<td></td>
<td>RQ 5000 lb final RQ</td>
</tr>
<tr>
<td>Potassium hydroxide 1310-58-3</td>
<td>1000 lb</td>
<td></td>
<td>RQ 1000 lb final RQ</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories

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

SARA 313

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol - 107-21-1</td>
<td>107-21-1</td>
<td>42.98</td>
<td>1.0</td>
</tr>
</tbody>
</table>

CWA (Clean Water Act)

<table>
<thead>
<tr>
<th>Component</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium hydroxide 1310-58-3 (0.2)</td>
<td>1000 lb</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

US State Regulations

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol 107-21-1</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Physical Hazards</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

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