Safety Data Sheet

Section 1: Identification

Product Identifier
Antifreeze

Product Name
Trade Name: Horizon Water System Antifreeze -50°F

Relevant identified uses of the substance or mixture and uses advised against
- Material for industrial applications
- Industrial and professional use
- Consumer end use

Details of the supplier of the safety data sheet

Manufacturer
Horizon Chemical Co., Inc.
2125 Energy Park Drive
St. Paul, MN 55108
Phone: (651) 917-3075

Emergency telephone number
1-800-535-5053 INFOTRACK

Section 2: Hazard(s) Identification

OSHA/HCS status
This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture
Not a hazardous substance or mixture

GHS label elements
- Hazard pictograms-No Pictogram
- Signal word-No Signal Word
- Hazard statements-Not a hazardous substance or mixture

Precautionary statements

Prevention
Not a hazardous substance or mixture

Response
If SWALLOWED: Relatively non-toxic. Ingestion of sizable amount (over 100ml) may cause some gastrointestinal upset and temporary central nervous system depression. Effects appear more severe in individuals with kidney problems.
If ON SKIN (or hair): Mild irritant and defatting agent, especially on prolonged contact.
If IN EYES: May cause transitory stinging and tearing.
If EXPOSED or CONCERNED:
Immediately call a POISON CENTER or a doctor/physician.

**Storage**
Store in a well-ventilated place.

**Disposal**
Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazards not otherwise classified**
Product is stable.

<table>
<thead>
<tr>
<th>Section 3: Composition/Information on Ingredients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance/mixture: Mixture</td>
</tr>
<tr>
<td>Chemical name: Propylene Glycol or Glycerin</td>
</tr>
<tr>
<td>Other means of identification: No</td>
</tr>
<tr>
<td>CAS number/other identifiers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
</table>

Does not contain hazardous substances

<table>
<thead>
<tr>
<th>Section 4: First Aid Measurements</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Description of necessary first aid measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 30 minutes. Cold water may be used. Get medical attention immediately.</td>
</tr>
<tr>
<td>Inhalation: Bring accident victims out into the fresh air. Call a physician immediately in severe cases or if recovery is not rapid.</td>
</tr>
<tr>
<td>Skin contact: After contact with skin, wash immediately with plenty of water. Remove contaminated clothing and wash before reuse.</td>
</tr>
<tr>
<td>Ingestion: Rinse mouth with water. If swallowed, give a glass of water to drink. If vomiting occurs give further water. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.</td>
</tr>
</tbody>
</table>

**Potential acute health effects**

**Eye contact**
Contact with eyes cause slight temporary irritation.

**Inhalation**
Not expected to be acute effects from inhalation.

**Skin contact**
Skin contact with the product is not likely to result in a significant irritation.

**Ingestion**
High doses may cause CNS depression (fatigue, dizziness and possibly loss of concentration, with collapse, coma and death in cases of severe over-exposure).

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

**Notes to physician**
In case of ingestion, monitor for acidosis and central nervous system changes. Exposed persons with previous kidney dysfunction may require special treatment

**Specific treatments**
Treat symptomatically.

**Protection of first-aiders**
Section 5: Fire Fighting Measures

Extinguishing media

Suitable extinguishing media

SMALL FIRE: Use DRY chemical powder, CO₂ or appropriate foam.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Unsuitable extinguishing media

Do not use water jet.

Specific hazards arising from the chemical

No data available

Hazardous thermal decomposition products/Products of combustion

Products of combustion are carbon oxides (CO, CO₂).

Special protective actions for fire fighters

Do not release runoff from fire control methods to sewers or waterways.

Special protective equipment for fire-fighters

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Do not touch or walk through spilt material. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Shut off all ignition sources.

Environmental precautions

Methods and materials for containment and cleaning up:

Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section 8 of this SDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including: the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits.

Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Shut off ignition sources; including electrical equipment and flames.

Section 7: Handling and Storage

Precautions for safe handling

Protective measures, advice on general occupational hygiene and conditions for safe storage, including any incompatibilities:

No special measures required. It is not considered a hazardous material in most industrial operations. Protect containers from physical damage. Sources of ignition such as smoking and open flames prohibited where this product is handled.

Store in a tightly closed containers in a cool, dry, well ventilated area away from sources of heat, moisture and incompatible substances. The suitable storage temperature is between 15-30°C temperatures. It is generally recommended that temperatures not exceeding 40°C.

Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid).

Section 8: Exposure Controls/Personal Protection

Control parameters
Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene Glycol</td>
<td>ACGIH (TWA)</td>
<td>OSHA (TWA)</td>
<td>OSHA (STEL)</td>
</tr>
<tr>
<td></td>
<td>10 mg/m³</td>
<td>474 mg/m3</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Appropriate engineering controls and Environmental exposure controls

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

Individual protection measures

Hygiene measures

No special protective clothing is normally required. Select protective clothing depending on industrial operations. Use mechanical ventilation equipment that is explosion-proof.

Eye/face protection: Use chemical safety goggles.

Skin protection

Hand protection and Body protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Other skin protection

Wash hands and other exposed areas with mild soap and water before eating or drinking.

Respiratory protection:

No respiratory protection required under normal circumstances. Approved organic vapor chemical cartridge or supplied air respirators should be worn when significant vapors are generated. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 1910.134. Self-contained breathing apparatus should be used for firefighting.

Respirator Type(s) [NIOSH Approved]: If the exposure limit is exceeded and engineering controls are not feasible, a half face piece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full face piece particulate respirator (NIOSH type N100 filter) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, Glycerin, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full face piece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in Oxygen-deficient atmospheres.

Section 9: Physical and Chemical Properties

Appearance

Physical state: Colorless liquid
Odor: None
Odor threshold: No Data Available
pH: ~7
Specific Gravity: 1.01
Melting point: -14°C
Boiling point: 185°C
Flash point: No Data Available
Evaporation rate (BuAc=1): No Data Available
Flammability (solid, gas): Not flammable
Lower and upper explosive (flammable) limits: LEL 2.4%, UEL 17.4% (propylene glycol)
Vapor pressure: 0.2 hPa at 20°C (propylene glycol)
Vapor density (Air=1): 2.62 (propylene glycol)
Solubility: Soluble in water
Partition coefficient: n-octanol/water: ~0.92 (propylene glycol)
Auto-ignition temperature: ~371°C (propylene glycol)
Decomposition temperature: No Data Available
Viscosity: No Data Available
VOC%: 0

Section 10: Stability and Reactivity

Reactivity
Stable under recommended storage conditions.

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid
Temperatures above the flash point and avoid excessive heat, open flame or other sources of ignition.

Incompatible materials
Can react with strong oxidizing agents and strong acids.

Hazardous decomposition products
Ignition and burning can release carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

Section 11: Toxicological Information

Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene glycol</td>
<td>Acute toxicity, oral (male rat)</td>
<td>LD50 = 22,000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Acute toxicity, dermal</td>
<td>LD50 = 20,800 mg/kg</td>
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</table>

Summary Comments:
Sensitization

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<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Results</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene glycol</td>
<td></td>
<td></td>
<td>No evidence of sensitization effect</td>
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</table>

Summary Comments:
Carcinogenicity

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<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Results</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene glycol</td>
<td></td>
<td></td>
<td>No known carcinogenic effects</td>
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</table>

Summary Comments:
Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Results</th>
<th>Basis</th>
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<tbody>
<tr>
<td>Propylene glycol</td>
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<td>No information available</td>
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</table>

Summary Comments:
Specific target organ toxicity (repeated exposure)

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<th>Product/ingredient name</th>
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<th>Results</th>
<th>Basis</th>
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</thead>
<tbody>
<tr>
<td>Propylene glycol</td>
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<td></td>
<td>No information available</td>
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</tbody>
</table>
Summary Comments:

Aspiration hazard

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Results</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene glycol</td>
<td></td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>

Summary Comments:

Information on the likely routes of exposure

Inhalation may blur vision. Ingesting may irritate the gastrointestinal tract.

Potential acute health effects

**Eye contact:** May cause transient eye irritation and discomfort.

**Inhalation:** Harmful concentrations of vapor do not normally arise except under high temperature or high atomization. High concentrations of mist may give rise to respiratory irritation.

**Skin contact:** Nonirritant on incidental contact.

**Ingestion:** No adverse effects expected, however, large amounts may cause nausea and vomiting.

Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact:** Eye irritation.

**Inhalation:** Nausea.

**Skin contact:** Skin irritation.

**Ingestion:** Irritation of the gastrointestinal tract, nausea and vomiting.

Potential chronic health effects (Propylene glycol)

**Carcinogenicity:** Not Classifiable as a Human Carcinogen.

**Mutagenicity:** Negative for genotoxicity using both in vitro and in vivo tests.

**Teratogenicity:** Results from studies in pregnant rats, mice, hamsters and rabbits demonstrate that propylene glycol is not teratogenic or fetotoxic.

**Developmental effects:** Results from studies in pregnant rats, mice, hamsters and rabbits demonstrate that propylene glycol is not teratogenic or fetotoxic

**Fertility effects:** No data available.

Numerical measures of toxicity

**Acute toxicity estimates**

Section 12: Ecological Information

**Toxicity**

**Acute Fish toxicity:** (Propylene glycol)

LC50 - Oncorhynchus mykiss (rainbow trout) – 40,613 mg/L - 96 h

LC50 – Pimephales promelas (fathead minnow) - 52,930 mg/l - 96 h

**Acute toxicity for daphnia:** (Propylene glycol)

EC50 - Daphnia magna (Water flea) – 10,000 mg/L - 48 h

**Acute toxicity for algae:** (Propylene glycol)

EC50 - Scenedesmus capricornutum (fresh water algae) - 19,000 mg/L - 96 h

**Acute bacterial toxicity:** (Propylene glycol)

No data available.

**Ecotoxicology Assessment:** (Propylene glycol)

Material is not expected to be toxic to aquatic life.

**Persistence and degradability**

**Biodegradability:** (Propylene glycol)
Readily biodegradable in aerobic conditions. There is evidence that it is degraded under anaerobic conditions.

**Stability in water: (Propylene glycol)**

Environmental releases of propylene glycol will tend to partition to water and soil, with little potential for evaporation.

**Photodegradation: (Propylene glycol)**

No data available

**Volatile (Henry's Law constant): (Propylene glycol)**

Partition coefficient n-octanol/water (log $K_{ow}$) = No data available

**Bioaccumulative potential**

**Bioaccumulation: (Propylene glycol)**

Bioconcentration factor (BCF): 0.09

**Mobility in soil: (Propylene glycol)**

Distribution among environmental compartments:

Environmental releases of propylene glycol will tend to partition to water and soil, with little potential for evaporation.

**Other adverse effects:**

This material is expected to be non-hazardous to aquatic species, and not considered to be persistent, bioaccumulating nor toxic.

**Section 13: Disposal Considerations**

**Disposal methods**

Dispose in accordance with applicable international, national and local laws, ordinances and statutes.

**Section 14: Transport Information**

**UN Number:** N/A

**UN Proper Shipping Name:** Not Regulated

**Exemptions:** N/A

**Transport hazard Class(es):** N/A

**Packing Group:** N/A

**Land Transport ADR/RID and GGVS/GGVE (Cross Border / Domestic)**

**Transport Hazard Class(es):** Not Regulated

**Maritime Transport IMDG/GGVSea**

**Transport Hazard Class(es):** Not Regulated

**Marine Pollutant:** No

**Air Transport ICAO-TI and IATA-DGR**

**Transport Hazard Class(es):** Not Regulated

**Section 15: Regulatory Information**

**Chemical Inventory Status-Part 1**

<table>
<thead>
<tr>
<th>Ingredient (CAS#)</th>
<th>TSCA</th>
<th>EC</th>
<th>Japan</th>
<th>Australia</th>
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</thead>
<tbody>
<tr>
<td>Propylene glycol (57-55-6)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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</tbody>
</table>

**Chemical Inventory Status-Part 2**

<table>
<thead>
<tr>
<th>Ingredient (CAS#)</th>
<th>Korea</th>
<th>Canada</th>
<th>Canada</th>
<th>Philippines</th>
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<tbody>
<tr>
<td>Propylene glycol (57-55-6)</td>
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<td>Yes</td>
<td>No</td>
<td>Yes</td>
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</tbody>
</table>
Federal, State & International Regulations - Part 1

<table>
<thead>
<tr>
<th>Ingredient (CAS#)</th>
<th>SARA 302</th>
<th>SARA 313</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RQ</td>
<td>TPQ</td>
</tr>
<tr>
<td>Propylene glycol</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>(57-55-6)</td>
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</table>

Federal, State & International Regulations - Part 2

<table>
<thead>
<tr>
<th>Ingredient (CAS#)</th>
<th>RCRA</th>
<th>TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CERCLA</td>
<td>261.33</td>
</tr>
<tr>
<td>Propylene glycol</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>(57-55-6)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chemical Weapons Convention: No
TSCA 12b: No
CDTA: No

SARA 311/312:
Acute: Yes, Chronic: No, Fire: No, Pressure: No, Reactivity: No
Mixture/Liquid
Australian Hazchem Code: None allocated
Poison Schedule: None allocated

Section 16: Other Information

History

Date of issue: 07/16/15
Version: 2a
Revised Sections(s): Name change
Prepared by: Horizon Chemical Co., Inc.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of the suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.