



## Safety Data Sheet

### Product Name: **Poly-Organic Extended Life 50/50 Antifreeze/Coolant Premix**

SDS No.: 032  
Product Code: 13-217  
Issue Date: 05/29/2015  
Version No.: 001

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#### 1. PRODUCT AND COMPANY IDENTIFICATION

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**Product Name: Poly-Organic Extended Life 50/50 Antifreeze/Coolant Premix**

**Company Name & Address:** GlyEco, Inc.  
4802 East Ray Road, Ste., 23-408  
Phoenix, AZ 85044

**For More Information Call:** 866-960-1539 (Monday-Friday 8:00-4:30)

**In Case of Emergency Call:** **Within the US & Canada 1-800-424-9300 or  
1+ 703-527-3887 (24 Hours/Day, 7 Days/Week – Collect Calls Accepted)**

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#### 2. HAZARDS IDENTIFICATION

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**OSHA Hazards:** Harmful by ingestion, Irritant

**Target Organs:** Kidneys, Liver

**Signal Words:** Warning

**Pictograms:**



**GHS Classification:**

|                      |             |
|----------------------|-------------|
| Acute toxicity, Oral | Category 4  |
| Eye irritation       | Category 2B |

**GHS Label Elements, including precautionary statements:**

Hazard Statements:

|      |                        |
|------|------------------------|
| H302 | Harmful if swallowed.  |
| H320 | Causes eye irritation. |

**Precautionary Statements:**

|      |                                       |
|------|---------------------------------------|
| P264 | Wash hands thoroughly after handling. |
|------|---------------------------------------|

|                |  |
|----------------|--|
| P270           | Do not eat, drink or smoke when using this product.  |
| P301+P312      | IF SWALLOWED: Call a POISON CENTER and get IMMEDIATE MEDICAL ATTENTION.  |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P330           | Rinse mouth.   |
| P337+P313      | If eye irritation persists: Get medical advice/attention.  |
| P501           | Dispose of all contents/containers in accordance with local regulations.   |

### Potential Health Effects

|            |   |
|------------|---|
| Eyes       | May cause eye irritation.   |
| Inhalation | May be harmful if inhaled. May cause respiratory tract irritation.  |
| Skin       | May be harmful if absorbed through skin. May cause skin irritation. |
| Ingestion  | May be harmful if swallowed.  |

### NFPA Ratings

|                 |     |
|-----------------|-----|
| Health          | 2   |
| Flammability    | 0   |
| Reactivity      | 0   |
| Specific hazard | N/A |

### HMIS Ratings

|            |   |
|------------|---|
| Health     | 2 |
| Fire       | 0 |
| Reactivity | 0 |
| Personal   | C |

0 =minimal 1= slight 2=moderate 3= serious 4= severe

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component              | Volume % | CAS #       | EINECS# / ELINCS# | Formula                                      | Molecular Weight |
|------------------------|----------|-------------|-------------------|--|------------------|
| Ethylene Glycol        | ≥50      | 107-21-1    | 203-473-3         | C <sub>2</sub> H <sub>6</sub> O <sub>2</sub> | 62.07 g/mol      |
| Antifreeze Inhibitors* | <10      | Proprietary | Proprietary       | Proprietary                                  | Proprietary      |
| Deionized Water        | Balance  | 7732-18-5   | 231-791-2         | H <sub>2</sub> O                             | 18.00 g/mol      |

\*Chemicals listed are only those ingredients which are not trade secrets, are classified as health hazards and are present above their concentration limits.

## 4. FIRST-AID MEASURES

|                   |  |
|-------------------|--|
| <b>Eyes</b>       | Immediately rinse with plenty of water for at least 15 minutes and seek medical attention immediately.   |
| <b>Inhalation</b> | Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately. |
| <b>Skin</b>       | Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately.            |
| <b>Ingestion</b>  | <b>Do Not Induce Vomiting!</b> Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.      |

## 5. FIRE-FIGHTING MEASURES

|  |   |
|--|---|
| <b>Suitable (and unsuitable) extinguishing media</b>                 | Product is not flammable. Use water, fog, foam, carbon dioxide or dry chemical on fires involving this product. Use appropriate media for adjacent fire. Cool unopened containers with water. |
| <b>Special protective equipment and precautions for firefighters</b> | Do not release runoff from fire control methods to sewers or waterways. Because fire may produce toxic thermal decomposition products, wear   |

|   |   |
|---|---|
|   | a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode. Full protective equipment including self-contained breathing apparatus should be used during a fire. During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Seek medical attention. |
| <b>Specific hazards arising from the chemical</b> | Closed containers may rupture or explode due to steam pressure build-up when exposed to extreme heat. Water may be used to cool closed containers. May emit toxic fumes (oxides of carbon) under fire conditions. (See also Stability and Reactivity section).  |

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## 6. ACCIDENTAL RELEASE MEASURES

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|  |   |
|--|---|
| <b>Personal precautions, protective equipment and emergency procedures</b> | See section 8 for recommendations on the use of personal protective equipment.  |
| <b>Environmental precautions</b>   | Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.   |
| <b>Methods and materials for containment and cleaning up</b>               | Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations. |

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## 7. HANDLING AND STORAGE

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### Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of aerosols.

### Conditions for safe storage, including any incompatibilities

Store in cool, dry well ventilated area. Store only in containers that are resistant to alkaline solutions. Keep away from incompatible materials (see section 10 for incompatibilities).

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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### Occupational exposure controls:

| Component       | Exposure Limits                 | Basis | Entity |
|-----------------|---------------------------------|-------|--------|
| Ethylene Glycol | 100 mg/m <sup>3</sup>           | STEL  | ACGIH  |
|                 | 50 ppm<br>125 mg/m <sup>3</sup> | STEL  | OSHA   |

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

### Personal Protection

|                   |  |
|-------------------|--|
| <b>Eyes</b>       | Wear chemical safety glasses or goggles, and face shield.                              |
| <b>Inhalation</b> | Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an |

|              |  |
|--------------|--|
|              | approved respirator.   |
| <b>Skin</b>  | Wear nitrile or rubber gloves, and full body covering. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. |
| <b>Other</b> | Not Available  |

### Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|   |                              |
|---|------------------------------|
| Appearance (physical state, color, etc.)    | Liquid, Colorless to Yellow  |
| Odor  |                              |
| pH  | 8.0-9.5                      |
| Specific gravity                            | 1.045 min.                   |
| Freezing point                              | -36°C (-34°F)                |
| Boiling point                               | 109°C (229°F)                |
| Flash point                                 | Not Flammable                |
| Flammability (solid, gas)                   | Not Flammable                |
| Upper/lower flammability or explosive limit | Not Explosive                |
| Vapor pressure                              | 10 mmHg at 20°C (68°F)       |
| Vapor density                               | 2.1 (air = 1)                |
| Solubility                                  | Completely soluble in water. |
| Percent volatile by Volume                  | NIL                          |

## 10. STABILITY AND REACTIVITY

|   |   |
|---|---|
| <b>Chemical Stability</b>                 | Stable  |
| <b>Possibility of Hazardous Reactions</b> | Will not occur.                                     |
| <b>Conditions to Avoid</b>                | Storage below 15.5°C (60°F) or above 65.5°C (150°F) |
| <b>Incompatible Materials</b>             | Strong acids, oxidizers.                            |
| <b>Hazardous Decomposition Products</b>   | Oxides of carbon.                                   |

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

#### Ethylene Glycol

|                    |  |
|--------------------|--|
| <b>Skin</b>        | LD50 Dermal - rabbit - 10,626 mg/kg        |
| <b>Eyes</b>        | Eyes - rabbit - Mild eye irritation - 24 h |
| <b>Respiratory</b> | Not Available                              |
| <b>Ingestion</b>   | LD50 Oral - rat - 4,700 mg/kg              |

### Carcinogenicity

|              |  |
|--------------|--|
| <b>IARC</b>  | No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
| <b>ACGIH</b> | No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.            |
| <b>NTP</b>   | No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.                 |
| <b>OSHA</b>  | No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.             |

### Signs & Symptoms of Exposure

|                    |  |
|--------------------|--|
| <b>Skin</b>        | Brief contact is not irritating. Prolonged contact, as well as clothing wetted with material may cause defatting of skin or irritation, seen as local redness with possibility of mild discomfort.   |
| <b>Eyes</b>        | Eye burns, watering eyes, redness.   |
| <b>Respiratory</b> | Irritation of nose and/or throat, drowsiness, headache, nausea.  |
| <b>Ingestion</b>   | Toxic when swallowed. Lethal dose for adults is 1-2mL per kilogram. Symptoms of exposure may include headache, weakness, confusion, nausea, dizziness, staggering gait, slurred speech, loss of concentration, faintness, vomiting, increased heart rate, decreased blood pressure, difficulty breathing, and pulmonary edema. Severe poisoning may cause death. |

|                                       |  |
|---------------------------------------|--|
| <b>Chronic Toxicity</b>               | Repeated overexposure may aggravate existing kidney disease. Repeated ingestion may cause kidney damage. |
| <b>Teratogenicity</b>                 | Not Available  |
| <b>Mutagenicity</b>                   | Not Available  |
| <b>Embryotoxicity</b>                 | Not Available  |
| <b>Specific Target Organ Toxicity</b> | Not Available  |
| <b>Reproductive Toxicity</b>          | Not Available  |
| <b>Respiratory/Skin Sensitization</b> | Not Available  |

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## 12. ECOLOGICAL INFORMATION

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### Ecotoxicity

#### *Ethylene Glycol*

|                             |  |
|-----------------------------|--|
| <b>Aquatic Vertebrate</b>   | LC50 - Oncorhynchus mykiss (rainbow trout) - 18,500 mg/l - 96 h<br>LC50 - Leuciscus idus (Golden orfe) - > 10,000 mg/l - 48 h<br>NOEC - Pimephales promelas (fathead minnow) - 32,000 mg/l - 7 d<br>NOEC - Pimephales promelas (fathead minnow) - 39,140 mg/l - 96 h |
| <b>Aquatic Invertebrate</b> | EC50 - Daphnia magna (Water flea) - 74,000 mg/l - 24 h<br>NOEC - Daphnia - 24,000 mg/l - 48 h<br>LC50 - Daphnia magna (Water flea) - 41,000 mg/l - 48 h  |
| <b>Terrestrial</b>          | Not Available  |

|                                      |                |
|--------------------------------------|----------------|
| <b>Persistence and Degradability</b> | Biodegradable. |
| <b>Bioaccumulative Potential</b>     | Not Available  |
| <b>Mobility in Soil</b>              | Not Available  |
| <b>PBT and vPvB Assessment</b>       | Not Available  |
| <b>Other Adverse Effects</b>         | Not Available  |

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## 13. DISPOSAL CONSIDERATIONS

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|                           |  |
|---------------------------|--|
| <b>Waste Residues</b>     | Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residues. |
| <b>Product Containers</b> | Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.   |

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

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## 14. TRANSPORTATION INFORMATION

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|                  |                     |
|------------------|---------------------|
| US DOT           | Not Dangerous Goods |
| TDG              | Not Dangerous Goods |
| IMDG             | Not Dangerous Goods |
| Marine Pollutant | No                  |
| IATA/ICAO        | Not Dangerous Goods |

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## 15. REGULATORY INFORMATION

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|                           |   |
|---------------------------|---|
| TSCA Inventory Status     | All ingredients are listed on the TSCA inventory.   |
| DSCL (EEC)                | All ingredients are listed on the DSCL inventory.   |
| California Proposition 65 | Not Listed  |
| SARA 302                  | Not Listed  |
| SARA 304                  | Not Listed  |
| SARA 311                  | Acute Health Hazard   |
| SARA 312                  | Acute Health Hazard   |
| SARA 313                  | Not Listed  |
| WHMIS Canada              | Class D-2A: Poisonous and infectious material- Other effects- Very toxic<br>Class D-1B: Poisonous and infectious material- Immediate and serious effects- Toxic |

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## 16. OTHER INFORMATION

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| Revision | Date |
|----------|------|
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|          |      |
|          |      |

Disclaimer: We believe that the information herein is factual but is not intended to be all inclusive. The information relates only to the specific material designated and does not relate to its use in combination with other materials or its use as to any particular process. Because safety standards and regulations are subject to change and because we have no continuing control over the material, those handling, storing or using the material should satisfy themselves that they have current information regarding the particular way the material is handled, stored or used and that the same is done in accordance with federal, state and local law. WE MAKE NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING (WITHOUT LIMITATION) WARRANTIES WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN OR WITH RESPECT TO FITNESS FOR ANY PARTICULAR USE.