1. Product Identification

Product name: Phase Two Resin, Part A
SDS Number: 0300A00
Product type: Epoxy Resin Mixture

Recommended use of the chemical and restrictions on use:
Recommended for, but not limited to, the laminating and molding of composite parts.

Restrictions:
None known.

Manufacturer/Supplier information:
Company name: SYSTEM THREE RESINS, INC.
Address: 8517 Commerce Place Dr NE
          Lacey, WA 98516
          United States
Telephone: 1-253-333-8118
Website: www.systemthree.com
Email: support@systemthree.com

Emergency Contact:
CHEMTEL (U.S. and CANADA) 1-800-704-9215
CHEMTEL (Outside the U.S.) – Call collect accepted +1-360-256-7365

2. Hazard(s) Identification

Classification of substance or mixture/Signal Word:
WARNING
Skin Corrosion/Irritation - Category 2
Serious Eye Damage/Eye Irritation - Category 2
Skin Sensitization - Category 1
Specific Target Organ Toxicity (Single Exposure) [Respiratory tract irritation] – Category 3

GHS Label Elements
Hazard Pictograms

Hazard Statements/Classification of substance or mixture:
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statements:
Precautionary Statements
Prevention
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P264 Wash hands thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
3. Composition/Information On Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Content (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phenol Formaldehyde Polymer Glycidyl Ether</td>
<td>28064-14-4</td>
<td>80 – 90%</td>
</tr>
<tr>
<td>Phenol Formaldehyde Polymer Glycidyl Ether Adduct</td>
<td>Trade Secret</td>
<td>10 – 20%</td>
</tr>
</tbody>
</table>

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section. Occupational exposure limits, if available, are listed in Section 8.

4. First-Aid Measures

Skin contact
Remove contaminated clothing and shoes and wipe excess off skin. Flush skin with water. Follow by washing in soap and water. If irritation occurs, seek medical attention. Do not reuse clothing until cleaned. Contaminated leather articles (shoes) cannot be decontaminated and should be destroyed.

Eye contact
Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Ingestion
Do not induce vomiting unless directed to do so by medical personnel. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately.

Inhalation
Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention.

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

Notes to physician
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments
No specific treatment.

5. Fire-Fighting Measures
Suitable extinguishing media
Alcohol-resistant foam, carbon dioxide (CO₂), dry chemical, water fog.

Unsuitable extinguishing media
None known.

Specific hazards arising from the chemical
In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water contaminated must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous decomposition products
Decomposition products may include the following materials:
Carbon dioxide
Carbon monoxide

Special protective actions for fire-fighters
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Further information
Do not allow run-off from firefighting to enter drains or water courses. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. Accidental Release Measures

Personal precautions
Wear proper personal protective equipment (PPE). Avoid direct contact with material. Proper PPE includes: disposable gloves, eye protection and skin protection.

Emergency procedures
If material is spilled, avoid contact with material. Persons not wearing appropriate protective equipment should leave the area of the spill until cleanup is complete.

Methods and materials for containment/cleanup
Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

Environmental precautions
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

7. Handling and Storage

Precautions for safe handling
Avoid contact with skin and eyes. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations. Use personal protective equipment. When using, do not eat, drink or smoke.

Precautions/Recommendations for safe/proper storage
Store epoxy products in temperature stable environment, out of the reach of pets or children. Securely fasten container lids and tops, and prevent products from sitting and below freezing temperatures.

8. Exposure Controls/Personal Protection

Occupational Exposure Limits
Not established.
Appropriate engineering controls  Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls Use appropriate containment to avoid environmental contamination. Do not allow spill to enter sewers or waterways.

Individual protection measures/Personal protective equipment

Eye/face protection Splash-proof goggles or safety spectacles with side shields are recommended. Always wear eye protection when sanding cured epoxy resins to avoid dust in eyes.

Hand protection Always wear impervious gloves: butyl rubber, nitrile rubber, Neoprene, PVC disposable gloves,

Skin protection Wear clean, body-covering clothing to avoid skin contact.

Respiratory protection Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Special instructions for protection and hygiene Wear gloves at all times when handling product, avoid direct contact with skin. When finished using product, dispose of gloves properly and wash hands with warm, soapy water.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical family</td>
<td>Epoxy Resin</td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear liquid</td>
</tr>
<tr>
<td>Physical State</td>
<td>Epoxy polymer mixture</td>
</tr>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Water clear</td>
</tr>
<tr>
<td>Odor</td>
<td>Little to no odor</td>
</tr>
<tr>
<td>Density (Specific Gravity)</td>
<td>9.81 lb/gal (1.1 – 1.2)</td>
</tr>
<tr>
<td>Viscosity</td>
<td>4,000 – 6,000 CPS</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Slower than ether</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper/lower flammability limit (by volume)</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper flammability limit (by volume)</td>
<td>Not available</td>
</tr>
<tr>
<td>Lower flammability limit (by volume)</td>
<td>Not available</td>
</tr>
<tr>
<td>Material VOC</td>
<td>None</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Heavier than air</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available</td>
</tr>
</tbody>
</table>
Solubility in water: Negligible
Partition coefficient: n-octanol/water: Not available
Auto-ignition temperature: Not available
Decomposition temperature: Not available

10. Stability and Reactivity

Reactivity: No specific test data related to reactivity available for this product.
Chemical Stability: Stable under normal conditions.
Possibility of hazardous reactions: Hazardous polymerization will not occur.
Conditions to avoid: Epoxy resins and epoxy resin hardeners react with each other producing heat. They should not be mixed with each other under uncontrolled conditions or in large mass as the ensuing exotherm may result in heat and smoke, resulting in hazardous decomposition products.
Incompatible materials: Strong oxidizing and reducing agents. Lewis and mineral acids.
Hazardous decomposition products: Oxides of carbon, aldehydes, and acids.
Other hazards: None known.

11. Toxicological Information

Acute Health Hazard (components): No comprehensive data (ingestion, inhalation, dermal) on mixture (product).

<table>
<thead>
<tr>
<th>Component</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phenol Formaldehyde</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;2,000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Polymer Glycidyl Ether</td>
<td>LD50 Dermal</td>
<td>Rat</td>
<td>&gt;2,000 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Irritation/Corrosion (components): No information on product itself.

<table>
<thead>
<tr>
<th>Component</th>
<th>Result</th>
<th>Species</th>
<th>Test</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phenol Formaldehyde</td>
<td>Mild irritant</td>
<td>Rabbit</td>
<td>Skin</td>
<td>-</td>
</tr>
<tr>
<td>Polymer Glycidyl Ether</td>
<td>Mild irritant</td>
<td>Rabbit</td>
<td>Eye</td>
<td>-</td>
</tr>
</tbody>
</table>

Sensitization: No information on product itself.

Mutagenicity: No information on product itself.
Carcinogenicity: No information on product itself.
Reproductive Toxicity: No information on product itself.
Teratogenicity: No information on product itself.
Specific target organ toxicity (single exposure): No information on product itself.

<table>
<thead>
<tr>
<th>Component</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phenol Formaldehyde</td>
<td>Category 3</td>
<td>-</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>Polymer Glycidyl Ether</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Specific target organ toxicity (repeated exposure): No information on product itself.

Aspiration hazard: No information on product itself.

Potential acute health effects

Eye Contact: Causes serious eye irritation.
Inhalation  May cause respiratory irritation.

Skin Contact  Causes skin irritation. May cause an allergic skin reaction.

Ingestion  Irritating to mouth, throat and stomach.

**Symptoms related to the physical, chemical and toxicological characteristics**

Eye Contact  Adverse symptoms may include the following:
- Pain
- Watering
- Redness

Inhalation  Adverse symptoms may include the following:
- Respiratory tract irritation
- Coughing

Skin Contact  Adverse symptoms may include the following:
- Irritation
- Redness

Ingestion  No specific data.

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Potential chronic health effects**

General  Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity  No known significant effects or critical hazards.

Mutagenicity  No known significant effects or critical hazards.

Teratogenicity  No known significant effects or critical hazards.

Developmental effects  No known significant effects or critical hazards.

Fertility effects  No known significant effects or critical hazards.

**Numerical measures of toxicity**

Acute toxicity estimates (ATEmix)  Not available.

### 12. Ecological Information

**Ecotoxicity**  No information on product itself.

<table>
<thead>
<tr>
<th>Component</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phenol Formaldehyde Polymer Glycidyl Ether</td>
<td>Acute LC50 1.5 mg/l</td>
<td>Fish</td>
<td>96 h</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 1.7 mg/l</td>
<td>Daphnia</td>
<td>48 h</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 0.3 mg/l</td>
<td>Daphnia</td>
<td>21 d</td>
</tr>
</tbody>
</table>

**Persistence and degradability**  No information on product itself.

**Bioaccumulative Potential**  No information on product itself.

<table>
<thead>
<tr>
<th>Component</th>
<th>LogPow</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phenol Formaldehyde Polymer Glycidyl Ether</td>
<td>3</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

**Mobility in Soil**
Soil/water partition coefficient (KOC)  No information on product itself.

Other adverse effects  No known significant effects or critical hazards.

13. Disposal Considerations

Waste from residues/ unused products  The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Product should not be allowed to enter drains, water courses or the soil; dispose of this material and its containers in a safe way. Contact supplier if guidance is required.

Contaminated packaging  Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

<table>
<thead>
<tr>
<th>Regulatory information</th>
<th>UN/NA number</th>
<th>Proper Shipping Name</th>
<th>Classes/*PG</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT</td>
<td></td>
<td>Non-regulated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TDG</td>
<td></td>
<td>Non-regulated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMO/IMDG</td>
<td>UN3082</td>
<td>Environmentally hazardous substance, liquid, n.o.s. (Bisphenol-A Epichlorohydrin Resin)</td>
<td>Class 9 III</td>
<td></td>
</tr>
<tr>
<td>IATA</td>
<td>UN3082</td>
<td>Environmentally hazardous substance, liquid, n.o.s. (Bisphenol-A Epichlorohydrin Resin)</td>
<td>Class 9 III</td>
<td></td>
</tr>
</tbody>
</table>

*PG: Packing group

Special precautions for user:  Transport within user’s premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

15. Regulatory Information

UNITED STATES

U.S. Federal Regulations

- United States – TSCA 12(b) – Chemical export notification: None Required.
- United States – TSCA 5(a)2 – Final significant new use rules: Not Listed.
- United States – TSCA 5(a)2 – Proposed significant new use rules: Not Listed.
- United States – TSCA 5(e) – Substance consent order: Not listed.

Clean Air Act – Ozone Depleting Substances (ODS)

- This product does not contain nor is it manufactured with ozone depleting substances.

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)

- None.

California Prop. 65

- WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer. WARNING: This product contains less than
1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>Cancer</th>
<th>Reproductive</th>
<th>No significant risk level</th>
<th>Maximum acceptable dosage level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxirane, 2-(chloromethyl)-</td>
<td>Yes</td>
<td>Yes</td>
<td>9 µg/day</td>
<td>No</td>
</tr>
</tbody>
</table>

EPA SARA 302 Extremely Hazardous Substances
EPA SARA 302/304/311/312 Hazardous Chemicals
SARA 313 Form R – Reporting requirements
United States inventory (TSCA 8b)

None required
Acute Health Hazard
None required
All components are listed or exempted.

CANADA

WHMIS (Canada) Class D-2B: Material causing other toxic effects (Toxic).
Canadian NPRI None required
CEPA Toxic substances None required

INTERNATIONAL REGULATIONS

International Lists
Australia inventory (AICS): All components are listed or exempted.
Canada inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
Japan inventory: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
New Zealand inventory (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): All components are listed or exempted.

16. Other Information, Including Date of Preparation or Last Revision

HMIS Rating

Health 2
Flammability 1
Physical Hazard 0

Date of Preparation January 15, 2020
Date of Last Revision September 12, 2019
Revision # 4.0
More Information 1-253-333-8118
Prepared by System Three Resins Inc.

The information contained herein is based on the data available to us and is believed to be correct. However, System Three Resins, Inc. makes no warranty, expressed or implied, regarding the accuracy of these data or the results to be obtained from the use thereof. System Three assumes no responsibility for injury from the use of the product described herein.