SAFETY DATA SHEET

1. Product Identification

Product name: SB-112 Resin, Part A
SDS Number: 0400A00
Product type: Epoxy polymer mixture
Recommended use of the chemical and restrictions on use: Directed at, but not limited to, the laminating and coating of fiber composites and wood.
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.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response
P304 + 340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P313 Call a POISON CENTER or doctor/physician if you feel unwell.
P302+352+363 IF ON SKIN: Wash with soap and water. Take off contaminated clothing and wash before reuse.
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical attention.

Storage
P401 Store at room temperature in a well-ventilated area.

Disposal
P501 Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified (HNOC) None Available.

3. Composition/Information On Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Content (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diglycidyl Ether of Bisphenol A</td>
<td>25068-38-6</td>
<td>70 – 80 %</td>
</tr>
<tr>
<td>Diglycidyl Ether of Bisphenol F</td>
<td>28064-14-4</td>
<td>5 – 10%</td>
</tr>
<tr>
<td>Benzyl Alcohol</td>
<td>100-51-6</td>
<td>5 – 10%</td>
</tr>
<tr>
<td>Alkyl Glycidyl Ether</td>
<td>17557-23-2</td>
<td>5 – 10 %</td>
</tr>
<tr>
<td>UV Blocker</td>
<td>Trade Secret</td>
<td>1 – 5%</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 (CO$_2$), 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>Chemical family</th>
<th>Epoxy Resin</th>
</tr>
</thead>
<tbody>
<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>Mild</td>
</tr>
<tr>
<td>Density (Specific Gravity)</td>
<td>9.50 lb/gal (1.1-1.3)</td>
</tr>
<tr>
<td>Viscosity</td>
<td>900 - 1100 cps @ 25°C</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt;300°F, Pensky-Martens Closed Cup</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>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 determined</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Negligible, in water</td>
</tr>
</tbody>
</table>
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>Diglycidyl Ether of Bisphenol A</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>11,400 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rat</td>
<td>2,000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Diglycidyl Ether of Bisphenol F</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;2,000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rat</td>
<td>&gt;2,000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Alkyl Glycidyl Ether</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>4,500 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;2,000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Benzyl Alcohol</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>1620 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation</td>
<td>Rat</td>
<td>&gt;4178 mg/m3</td>
<td>4 h, aerosol</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>Diglycidyl Ether of Bisphenol A</td>
<td>Moderate to severe irritation</td>
<td>Rabbit</td>
<td>Skin</td>
<td>4 h</td>
</tr>
<tr>
<td></td>
<td>Mild irritation</td>
<td>Rabbit</td>
<td>Eye</td>
<td>24 h</td>
</tr>
<tr>
<td>Diglycidyl Ether of Bisphenol F</td>
<td>Mild irritant</td>
<td>Rabbit</td>
<td>Skin</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Mild irritant</td>
<td>Rabbit</td>
<td>Eye</td>
<td>-</td>
</tr>
<tr>
<td>Benzyl Alcohol</td>
<td>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

Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Component</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diglycidyl Ether of Bisphenol A</td>
<td>Category 3</td>
<td>-</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>Diglycidyl Ether of Bisphenol F</td>
<td>Category 3</td>
<td>-</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>Alkyl Glycidyl Ether</td>
<td>Category 3</td>
<td>-</td>
<td>Respiratory tract irritation</td>
</tr>
</tbody>
</table>

Specific target organ toxicity (repeated exposure)

Aspiration hazard

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 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

<table>
<thead>
<tr>
<th>Component</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diglycidyl Ether of Bisphenol A</td>
<td>Acute LC50 1.3 mg/l</td>
<td>Fish</td>
<td>96 h</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 2.1 mg/l</td>
<td>Daphnia</td>
<td>48 h</td>
</tr>
<tr>
<td>Diglycidyl Ether of Bisphenol F</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>
<tr>
<td>Benzyl Alcohol</td>
<td>Acute LC50 460 mg/l</td>
<td>Fish</td>
<td>96 h</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 230 mg/l</td>
<td>Invertebrates</td>
<td>48 h</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 310 mg/l</td>
<td>Algae</td>
<td>72 h</td>
</tr>
</tbody>
</table>

### Persistence and degradability

<table>
<thead>
<tr>
<th>Component</th>
<th>LogPow</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diglycidyl Ether of Bisphenol A</td>
<td>2.64 – 3.78</td>
<td>3 – 31 31.00</td>
<td>low</td>
</tr>
<tr>
<td>Diglycidyl Ether of Bisphenol F</td>
<td>3</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>Benzyl Alcohol</td>
<td>1.05</td>
<td>1.37 (calculated)</td>
<td>-</td>
</tr>
</tbody>
</table>

### Bioaccumulative Potential

<table>
<thead>
<tr>
<th>Component</th>
<th>LogPow</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diglycidyl Ether of Bisphenol A</td>
<td>2.64 – 3.78</td>
<td>3 – 31 31.00</td>
<td>low</td>
</tr>
<tr>
<td>Diglycidyl Ether of Bisphenol F</td>
<td>3</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>Benzyl Alcohol</td>
<td>1.05</td>
<td>1.37 (calculated)</td>
<td>-</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>
</tbody>
</table>
IATA: UN3082

Environmentally hazardous substance, liquid, n.o.s. (Bisphenol-A Epichlorohydrin Resin)

*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-(phenoxyethyl)-</td>
<td>Yes</td>
<td>No</td>
<td>5 µg/day</td>
<td>No</td>
</tr>
<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

None required

EPA SARA 302/304/311/312 Hazardous Chemicals

Acute Health Hazard

SARA 313

None required

Form R – Reporting requirements

United States inventory (TSCA 8b)

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
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.