


1. Product Identification

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| Product name | Sealtronic Resin, Part A |
| SDS Number | F1500A |
| Product type | Epoxy polymer mixture |
| Recommended use of the chemical and restrictions on use | Directed at, but not limited to, potting of electronics. |
| Restrictions | None known. |
| Manufacturer/Supplier information | |
| Company name | SYSTEM THREE RESINS, INC. |
| Address | 3500 W. Valley Hwy, Suite Suite 105 Auburn, WA 98001-2436 United States |
| Telephone | 1-253-333-8118 |
| Website | www.systemthree.com |
| Email | support-08@systemthree.com |
| Emergency Contact | CHEMTREC (U.S. and CANADA) 1-800-424-9300 CHEMTREC (Outside the U.S.) 1-703-527-0585 |

2. Hazard(s) Identification

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| 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 |
| <u>GHS Label Elements</u> 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 | |
| <u>Precautionary Statements</u> Prevention | P280 Wear protective gloves. Wear eye or face protection. P201 Obtain special instructions before use. P271 Use only outdoors or in a well-ventilated area. P261 Avoid breathing vapor. P264 Wash hands thoroughly after handling. |

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| Response | <p>P272 Contaminated work clothing should not be allowed out of the workplace.</p> <p>P304 + 340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P313 Call a POISON CENTER or doctor/physician if you feel unwell.</p> <p>P302+352+363 IF ON SKIN: Wash with soap and water. Take off contaminated clothing and wash before reuse.</p> <p>P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.</p> |
| 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

| Chemical Name | CAS Number | Content (%) |
|---------------------------------|------------|-------------|
| Diglycidyl Ether of Bisphenol A | 25068-38-6 | 80-90% |
| Diglycidyl Ether of Bisphenol F | 28064-14-4 | 5-10% |

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

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| Skin contact | Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse. |
| 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 | Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. Do not induce vomiting without medical advice. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain open airway. Loosed tight clothing such as a collar, tie, belt, or waistband. |
| Inhalation | Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain open airway. Loosen tight clothing such as a collar, tie, belt, or waistband. |

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

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| 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

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| 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

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| Personal precautions | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Wear proper protective clothing, gloves and eye/face protection. |
| Emergency procedures | If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. |
| 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). |

7. Handling and Storage

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| Precautions for safe handling | Put on appropriate personal protective equipment. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid contact with skin and eyes. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate |
|--------------------------------------|---|

respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. When using, do not eat, drink or smoke. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Precautions/Recommendations for safe/proper storage

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure Controls/Personal Protection

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| Permissible exposure limit (OSHA) | None established. |
| Threshold limit value (ACGIH) | None 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 | Discard contaminated leather articles. Remove contaminated clothing. Wash at the end of each work shift and before eating smoking or using the toilet. Provide readily accessible eye wash stations and safety showers. |

9. Physical and Chemical Properties

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| Chemical family | Epoxy Resin |
| Appearance | Clear Resin |
| Physical State | Epoxy polymer mixture |
| Form | Liquid |
| Color | Colorless or Black |

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|---|------------------------------------|
| Odor | Little or no odor |
| Density (Specific Gravity) | 1.1-1.3 |
| Viscosity | 3,000 CPS @77°F |
| pH | N/A |
| Melting point/freezing point | N/A |
| Initial boiling point and boiling range | N/A |
| Flash point | >300°F (Pensky-Martens Closed Cup) |
| Evaporation rate | Slower than ether |
| Flammability (solid, gas) | Data not available |
| Upper/lower flammability limit (by volume) | N/A |
| Upper flammability limit (by volume) | N/A |
| Lower flammability limit (by volume) | N/A |
| Material VOC | None |
| Vapor density | Heavier than air |
| Relative density | Not determined |
| Solubility in water | Negligible |
| Partition coefficient: n-octanol/water | N/A |
| Auto-ignition temperature | N/A |
| Decomposition temperature | N/A |

10. Stability and Reactivity

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| Reactivity | No specific test data related to reactivity available for this product or its ingredients. |
| Chemical Stability | Stable under normal conditions. |
| Possibility of hazardous reactions | Under normal conditions of storage and use, hazardous reactions will not occur. |
| Conditions to avoid | Extremes of temperature and direct sunlight. |
| Incompatible materials | Reactive or incompatible with the following materials: Strong oxidizing agents Strong acids Aliphatic amines |
| Hazardous decomposition products | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| Other hazards | Reacts with considerable heat release with some curing agents. |

11. Toxicological Information

Acute Health Hazard (components)

No information on product itself.

| Component | Result | Species | Dose | Exposure |
|---------------------------------|-------------|---------|--------------|----------|
| Diglycidyl Ether of Bisphenol A | LD50 Oral | Rat | 11,400 mg/kg | - |
| | LD50 Dermal | Rat | 2,000 mg/kg | - |

Irritation/Corrosion (components)

No information on product itself.

| Component | Result | Species | Score | Exposure |
|---------------------------------|---|---------|-----------|----------|
| Diglycidyl Ether of Bisphenol A | Skin – Erythema/Eschar 404 Acute Dermal Irritation/Corrosion | Rabbit | 1.5 – 2 | - |
| | Skin – Edema 404 Acute Dermal Irritation/Corrosion | Rabbit | 1.0 – 1.5 | - |
| | Eyes – 405 Acute Eye Irritation/Corrosion | Rabbit | 0 | - |
| | Eyes – Redness of the conjunctivae | Rabbit | 0.7 | - |
| | Skin – Moderate irritant | Rabbit | | 24 hrs |
| | Eyes – Mild irritant | Rabbit | | - |

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.

| Component | Category | Route of exposure | Target organs |
|---------------------------------|------------|-------------------|------------------------------|
| Diglycidyl Ether of Bisphenol A | Category 3 | | Respiratory tract irritation |
| Diglycidyl Ether of Bisphenol F | Category 3 | | Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

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 or irritation
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

Not available.

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. |

12. Ecological Information

Ecotoxicity No information on product itself.

| Component | Result | Species | Exposure |
|---------------------------------|---|--------------------------------------|----------|
| Diglycidyl Ether of Bisphenol A | Acute LC50 1.3 mg/l – 203 Fish, Acute Toxicity Test | Fish – Fish | 96 h |
| | Acute EC50 2.1 mg/l – 202 Daphnia sp. Acute Immobilization Test and Reproduction Test | Aquatic invertebrates. Water flea | 48 h |
| | Acute NOEC 0.3 mg/l – 211 Daphnia Magna Reproduction Test | Aquatic invertebrates. Water flea | 21 d |
| | Acute LC50 > 11 mg/l | Aquatic plants – Algae | 72 h |

Persistence and degradability No information on product itself.

Bioaccumulative Potential No information on product itself.

| Component | LogPow | BCF | Potential |
|---------------------------------|-------------|--------------|-----------|
| Diglycidyl Ether of Bisphenol A | 2.64 – 3.78 | 3 – 31 31.00 | low |
| Diglycidyl Ether of Bisphenol F | 3 | - | low |

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.

International Transport Regulations

| Regulatory information | UN/NA number | Proper Shipping Name | Classes/*PG | Additional Information |
|------------------------|--------------|--|-------------|------------------------|
| DOT | | Non-regulated | | |
| TDG | | Non-regulated | | |
| IMO/IMDG | UN3082 | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (LIQUID EPOXY RESIN) | Class 9 III | |
| IATA (Cargo) | UN3082 | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (LIQUID EPOXY RESIN) | Class 9 III | |

*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.

California Prop. 65

WARNING: This product contains epichlorohydrin, known to the State of California to cause cancer. WARNING: This product contains epichlorohydrin, known to the State of California to cause birth defects or other reproductive harm. For more information, go to www.Prop65Warnings.ca.gov.

| Ingredient Name | Cancer | Reproductive | No significant risk level | Maximum acceptable dosage level |
|----------------------------|--------|--------------|---------------------------|---------------------------------|
| Oxirane, 2-(phenoxyethyl)- | Yes | No | 5 µg/day | No |
| Oxirane, 2-(chloromethyl)- | Yes | Yes | 9 µg/day | No |

EPA SARA 302 Extremely Hazardous Substances

None required.

EPA SARA 302/304/311/312 Hazardous Chemicals

Acute Health Hazard.

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 CEPA Toxic substances

None Required
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 | April 4, 2018 |
| Date of Last Revision | February 3, 2017 |
| Revision # | 2.0 |
| More Information | 1-253-333-8118 |
| Prepared by | J. Bartlett, 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.