


## 1. Product Identification

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<b>Product name</b>	T-88 Resin, Part A
<b>SDS Number</b>	1100A000
<b>Product type</b>	Epoxy polymer mixture
<b>Recommended use of the chemical and restrictions on use</b>	Directed at, but not limited to, the adhesion of similar and dissimilar substrates.
<b>Restrictions</b>	None known.
<b>Manufacturer/Supplier information</b>	
<b>Company name</b>	SYSTEM THREE RESINS, INC.
<b>Address</b>	3500 W. Valley Hwy, Suite Suite 105 Auburn, WA 98001-2436 United States
<b>Telephone</b>	1-253-333-8118
<b>Website</b>	www.systemthree.com
<b>Email</b>	support-08@systemthree.com
<b>Emergency Contact</b>	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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<b>Classification of substance or mixture/Signal Word</b>	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
<b><u>GHS Label Elements</u></b> <b>Hazard Pictograms</b>	
<b>Hazard Statements/Classification of substance or mixture</b>	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H335 May cause respiratory irritation.
<b>Precautionary statements</b>	
<b><u>Precautionary Statements</u></b> <b>Prevention</b>	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. P264 Wash hands thoroughly after handling.
<b>Response</b>	P304 + 340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

**Storage** 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.  
**Disposal** P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.  
P401 Store at room temperature in a well-ventilated area.  
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	90-100%
Diglycidyl Ether of Bisphenol F	28064-14-4	1-10%

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

**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** Flush with water for 15 minutes holding eye lids open. Seek medical attention.

**Ingestion** Do not give liquids if victim is unconscious or very drowsy. Otherwise, give no more than 2 glasses of water and induce vomiting by giving 2 tablespoons syrup of ipecac (1 tablespoon and 1 glass of water for child). If ipecac is unavailable, give 2 glasses of water and induce vomiting by touching finger to back of throat. Keep head below hips while vomiting. Get medical attention.

**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 symptoms as they appear. 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<sub>2</sub>).  
Dry chemical  
Water Fog

**Unsuitable extinguishing media** None known.

**Specific hazards arising from the chemical** Potential skin irritation. Epoxy in mass can create exotherm.

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

<b>Special protective actions for fire-fighters</b>	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.
<b>Special protective equipment for fire-fighters</b>	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
<b>Further information</b>	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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<b>Personal precautions</b>	Wear proper personal protective equipment (PPE). Avoid direct contact with material. Proper PPE includes: disposable gloves, eye protection and skin protection.
<b>Emergency procedures</b>	If materials is spilled, avoid contact with material. Persons not wearing appropriate protective equipment should leave the area of the spill until cleanup is complete.
<b>Methods and materials for containment/cleanup</b>	Stop spill at source, dike area to prevent spreading, pump liquid to salvage tank or drum. Remaining liquid may be taken up on clay, diatomaceous earth, sawdust or other absorbent, and shoveled into disposal container.
<b>Environmental precautions</b>	Avoid dispersal of spilled material, 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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<b>Precautions for safe handling</b>	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.
<b>Precautions/Recommendations for safe/proper storage</b>	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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<b>Occupational Exposure Limits</b>	None established.
<b>Appropriate engineering controls</b>	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.

<b>Environmental exposure controls</b>	Use appropriate containment to avoid environmental contamination. Do not allow spill to enter sewers or waterways.
<b>Individual protection measures/Personal protective equipment</b>	
<b>Eye/face protection</b>	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.
<b>Hand protection</b>	Always wear impervious gloves: butyl rubber, nitrile rubber, Neoprene, PVC disposable gloves,
<b>Skin protection</b>	Wear clean, body-covering clothing to avoid skin contact.
<b>Respiratory protection</b>	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.
<b>Special instructions for protection and hygiene</b>	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

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<b>Chemical family</b>	Epoxy Resin
<b>Appearance</b>	Clear viscous liquid
<b>Physical State</b>	Epoxy polymer mixture
<b>Form</b>	Liquid
<b>Color</b>	Water clear
<b>Odor</b>	Little or no odor
<b>Density (Specific Gravity)</b>	9.5-9.7 lb/gal (1.1-1.2)
<b>Viscosity</b>	8,000-10,000 cps @ 25°C
<b>pH</b>	Data not available
<b>Melting point/freezing point</b>	Data not available
<b>Initial boiling point and boiling range</b>	Data not available
<b>Flash point</b>	>300°F, Pensky-Martens Closed Cup
<b>Evaporation rate</b>	Slower than ether
<b>Flammability (solid, gas)</b>	Data not available
<b>Upper/lower flammability limit (by volume)</b>	
<b>Upper flammability limit (by volume)</b>	N/A
<b>Lower flammability limit (by volume)</b>	N/A
<b>Material VOC</b>	None
<b>Vapor density</b>	Heavier than air
<b>Relative density</b>	Not determined
<b>Solubility in water</b>	Negligible, in water
<b>Partition coefficient: n-octanol/water</b>	3
<b>Auto-ignition temperature</b>	300°C (572.00°F)

Decomposition temperature

Data not available

## 10. Stability and Reactivity

<b>Reactivity</b>	None
<b>Chemical Stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization will not occur.
<b>Conditions to avoid</b>	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.
<b>Incompatible materials</b>	Strong oxidizing agents, Lewis and mineral acids.
<b>Hazardous decomposition products</b>	Oxides of carbon, aldehydes, acids.
<b>Other hazards</b>	None known.

## 11. Toxicological Information

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

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)**

Component	Result	Species	Test	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**

<b>Soil/water partition coefficient (KOC)</b>	No information on product itself.
<b>Other adverse effects</b>	No known significant effects or critical hazards.

### **13. Disposal Considerations**

<b>Waste from residues/ unused products</b>	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.
<b>Contaminated packaging</b>	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
<b>DOT</b>		Non-regulated		
<b>TDG</b>		Non-regulated		
<b>IMO/IMDG</b>	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BISPHENOL-A EPICHLOROHYDRIN RESIN)	Class 9 III	
<b>IATA (Cargo)</b>	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BISPHENOL-A EPICHLOROHYDRIN RESIN)	Class 9 III	

\*PG: Packing group

<b>Special precautions for user:</b>	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.
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### **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 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.

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**

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**

2/13/17

**Date of Last Revision**

12/7/2016

**Revision #**

3.0

**More Information**

1-253-333-8118

**Prepared by**

N. Kim, 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.