



# SAFETY DATA SHEET

## 1. Product Identification

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Product name	General Purpose Epoxy Resin
SDS Number	0100A00
Product type	Epoxy polymer mixture.
Recommended use of the chemical and restrictions on use	Directed at, but not limited to, the coating, bonding, and reinforcing of wood and fiber composites.
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	DANGER. Skin Corrosion/Irritation - Category 2 Serious Eye Damage/Eye Irritation - Category 2 Skin Sensitizer – Category 1 Specific Target Organ Toxicity (Single Exposure) [Respiratory tract irritation] – Category 3
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### 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.
P261	Avoid breathing vapors.
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.

<b>Response</b>	P280	Wear protective gloves. Wear eye or face protection.
	P304 + 340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	P302+352	IF ON SKIN: Wash with soap and water.
	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.
<b>Storage</b>	P312	Call a POISON CENTER or doctor/physician if you feel unwell.
	P362 + P364	Take off contaminated clothing and wash it before reuse.
	P401	Store above 32 °F / 0 °C
<b>Disposal</b>	P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
	P501	Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Hazards not otherwise classified (HNOC)</b>		None Available.

### 3. Composition/Information On Ingredients

Chemical Name	CAS Number	Content (%)
Diglycidyl Ether of Bisphenol A	25068-38-6	60 – 70 %
Alkyl Glycidyl Ether	68609-97-2	15 – 20%
Alkyl Glycidyl Ether	74398-71-3	1 – 10%
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

<b>Skin contact</b>	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.
<b>Eye contact</b>	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Seek medical attention.
<b>Ingestion</b>	Wash out mouth with water. 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 unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Following exposure or if feeling unwell. Never give anything by mouth to an unconscious person. If unconscious, place in a recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
<b>Inhalation</b>	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**

<b>Notes to physician</b>	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	No specific treatment.

## 5. Fire-Fighting Measures

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<b>Suitable extinguishing media</b>	Alcohol-resistant foam, dry chemical, water fog or carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	None known.
<b>Specific hazards arising from the chemical</b>	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.
<b>Hazardous decomposition products</b>	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>	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.
<b>Emergency procedures</b>	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.
<b>Methods and materials for containment/cleanup</b>	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.
<b>Environmental precautions</b>	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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<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
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<b>Precautions/Recommendations for safe/proper storage</b>	<p>smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p> <p>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.</p>
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## 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>	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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<b>Chemical family</b>	Epoxy Resin
<b>Appearance</b>	Pourable 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>	600-750 cps @ 25°C
<b>pH</b>	N/A
<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>	
Upper flammability limit (by volume)	N/A
Lower flammability limit (by volume)	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>	Data not available
<b>Auto-ignition temperature</b>	300°C (572.00°F)
<b>Decomposition temperature</b>	Not available

## 10. Stability and Reactivity

<b>Reactivity</b>	Stable.
<b>Chemical Stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Under normal conditions of storage and use, hazardous reactions 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>	Reactive or incompatible with the following materials: Strong oxidizing agents Lewis acids Mineral acids
<b>Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
<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	-
Diglycidyl Ether of Bisphenol F	LD50 Oral	Rat	>2,000 mg/kg	-
	LD50 Dermal	Rat	>2,000 mg/kg	-
Alkyl Glycidyl Ether	LD50 Oral	Rat	17,100 mg/kg	-

Alkyl Glycidyl Ether	LD50 Oral	Rat	>5,000 mg/kg	-
	LD50 Dermal	Rabbit	>2,000 mg/kg	-

#### **Irritation/Corrosion (components)**

No information on product itself.

Component	Result	Species	Test	Exposure
Diglycidyl Ether of Bisphenol A	Moderate to severe irritation	Rabbit	Skin	4 h
	Mild irritation	Rabbit	Eye	24 h
Diglycidyl Ether of Bisphenol F	Mild irritant	Rabbit	Skin	-
	Mild irritant	Rabbit	Eye	-
Alkyl Glycidyl Ether	Moderate irritant	Rabbit	Skin	24 h

#### **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
Alkyl Glycidyl Ether	Category 3		Respiratory tract irritation

#### **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**

<b>General</b>	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
<b>Carcinogenicity</b>	No known significant effects or critical hazards.
<b>Mutagenicity</b>	No known significant effects or critical hazards.
<b>Teratogenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.

**Numerical measures of toxicity**

<b><u>Acute toxicity estimates (ATEmix)</u></b>	Not available.
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## 12. Ecological Information

<b><u>Ecotoxicity</u></b>	No information on product itself.
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Component	Test	Species	Result	Exposure
Diglycidyl Ether of Bisphenol A	Acute LC50	Fish	1.3 mg/l	96 h
	Acute LC50	Daphnia	2.1 mg/l	48 h
Diglycidyl Ether of Bisphenol F	Acute LC50	Fish	1.5 mg/l	96 h
	Acute LC50	Daphnia	1.7 mg/l	48 h
	Chronic NOEC	Daphnia	0.3 mg/l	21 d
Alkyl Glycidyl Ether	Acute LC50	Fish	1.8 g/l	96 h
	Acute EC50	Daphnia	7.2 mg/l	48 h
	Acute EC50	Algae	844 mg/l	72 h

<b><u>Persistence and degradability</u></b>	No information on product itself.
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<b><u>Bioaccumulative Potential</u></b>	No information on product itself.
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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
Alkyl Glycidyl Ether	3.77	160 – 263 160.00	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>	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.
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**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		Not regulated		
TDG		Not regulated		
IMO/IMDG	UN3082	Environmentally Hazardous Substance, Liquid, n.o.s. (Bisphenol-A Epichlorohydrin Resin)	Class 9 III	
IATA (Cargo)	UN3082	Environmentally Hazardous Substance, Liquid, n.o.s. (Bisphenol-A Epichlorohydrin 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 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  
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

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### HMIS Rating

Health	2
Flammability	1
Physical Hazard	0

<b>Date of Preparation</b>	February 15, 2017
<b>Date of Last Revision</b>	September 15, 2015
<b>Revision #</b>	2.0
<b>More Information</b>	1-253-333-8118
<b>Prepared by</b>	N. Kim, System Three Resins Inc.

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