

**KRETUS®****Safety Data Sheet****SECTION 1: IDENTIFICATION**

**Product Name:** KRETUS Top Shelf® Epoxy (TSE), Part A, A-, CAST-, COVE-, CR-, ESD- LG-, and T-Resin; Easy Patch (EZ Patch) Part A

**Recommended Use:** For professional use only.

**Manufacturer:** Kretus, 1055 W. Struck Ave., Orange, CA 92867

**Telephone:** (714) 694-2061

**24 Hour Emergency Telephone Number:** (800) 255-3924 (CHEMTEL)

Emergency telephone numbers are to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to customer service.

**Comments:** To the best of our knowledge, this Safety Data Sheet conforms to the requirements of US OSHA 29 CFR1910.1200, 91/155/EEC.

**SECTION 2: HAZARD IDENTIFICATION**

Skin corrosion: Category 2

Skin sensitization: Category 1

Serious eye damage: Category 2

Germ cell mutagenicity: Category 2

Reproductive toxicity: Category 1B

Specific target organ toxicity (single exposure): Category 1

Specific target organ toxicity: Category 1

Acute aquatic toxicity: Category 2

Chronic aquatic toxicity: Category 2

**WARNING!**

Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Toxic to aquatic life with long lasting effects

**Prevention:**

Avoid breathing dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Take off contaminated clothing and wash before reuse.

Avoid release to the environment. Collect spillage.

**Response:**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.

**Storage:** Keep container tightly closed and locked in a cool, well-ventilated place.

**Disposal:** Dispose of contents/container to an approved waste disposal plant in accordance with applicable laws and regulations, and product characteristics at time of disposal.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret. See Section 11 for Toxicological Information.

Chemical Name	CAS No.	Concentration (% by Weight)
Oxirane, 2, 2'-{(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-, homopolymer	25085-99-8	50% - 60%

### SECTION 4: FIRST-AID MEASURES

**General Advice**

Seek medical advice or medical attention if condition persists.

**Contact with Eyes**

Rinse immediately with plenty of water for 15 minutes and seek advice of an eye specialist/physician. Continue rinsing eyes during transport to hospital. Do not remove contact lens if worn.

**Contact with Skin**

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Take victim immediately to hospital to obtain medical attention. Destroy or thoroughly clean contaminated shoes before reuse.

**Inhalation**

Move victims into fresh air. If breathing is labored, administer oxygen. If not breathing, give artificial respiration. Consult a doctor immediately.

**Ingestion**

Rinse out mouth, spit out liquid. Do not induce vomiting and seek medical advice immediately. Never give anything by mouth to an unconscious person.

**Notes to Physician**

No specific treatment. Treat symptomatically. Call the poison control center immediately if large quantities have been ingested.

### SECTION 5: FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media:** Water fog, foam, dry chemical, carbon dioxide, dry sand.

**Special Exposure Hazards:** 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. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**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.

**Danger of Explosion:** This product does not present an explosion hazard

**Flammable Limits:** Not Available

**Explosion Limits:** Not Available

**Auto-Ignition:** Not Available

**Flash Point:** >200°C (>392°F) [DIN 51758 EN 22719 (Pensky-Martens Closed Cup)]

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment, and Emergency Procedures

#### 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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

#### Environmental Precautions

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

#### Methods and Materials for Containment and Clean-up

Stop leak if without risk. Move containers from spill area. Approach release from upwind. 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 (see section 13). Contaminated absorbent material may pose the same hazard as the spilled product. Note: See Section 1 for emergency contact information and Section 13 for waste disposal.

## SECTION 7: HANDLING AND STORAGE

### Precautions for Safe-Handling

Put on appropriate personal protective equipment, PPE (see Section 8). Eating and drinking should be prohibited in areas where this material is handled, stored and processed. Remove contaminated PPE or clothing, wash hands and face before eating and drinking. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Use only in area provided with appropriate exhaust ventilation. Empty containers retain product residue and can be hazardous. Do not get in eyes, skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment.

### Conditions for Safe Storage

Store between 4 to 26°C (40 to 80°F) in accordance with local regulations away from sources of heat, ignition, and direct sunlight. Store in original container. Keep in a dry, well-ventilated area, and away from incompatible materials (see section 10). 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 or unapproved containers. Use appropriate containment to avoid environmental contamination.

**SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION**

**Special Note for Exposure Control:** Consult local authorities for acceptable exposure limits.

EXPOSURE GUIDELINES OSHA PEL (TWA): Not Determined

ACGIH TLV (TWA): Not Determined

NIOSH REL (TWA): Not Determined

**Engineering Measures**

No special ventilation requirements. If possible work in ventilated area. Provide natural or explosion-proof fan to ensure adequate ventilation, especially in confined area. Avoid contact with skin, eyes, and clothing.

**Environmental Exposure Controls**

Construct a dike to prevent spreading. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Hygiene Measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating and drinking, smoking or using the lavatory and at the end of the working period. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protection**

**Respiratory protection:** In case of inadequate ventilation wear VAPOR respiratory protection. 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.

**Eye/face protection:** Splash proof safety glasses.

**Skin protection:** Neoprene rubber or plastic apron. Neoprene rubber or plastic gloves. Long sleeved clothing or wear protective sleeves. Remove and wash contaminated clothing before re-use.

**Other Precautions:** Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Neoprene gloves. PVC disposable gloves. Nitrile rubber. Butylrubber. Impervious gloves. (The breakthrough time of the selected glove(s) must be greater than the intended use period.)

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Liquid
<b>Odor</b>	Faint
<b>Odor Threshold</b>	No data available
<b>pH</b>	Neutral
<b>Melting/Freezing Point</b>	No data available
<b>Initial Boiling Point and Boiling Range</b>	212°F
<b>Flash Point</b>	No data available
<b>Evaporation Rate</b>	No data available
<b>Flammability</b>	No data available
<b>Upper/Lower Flammability or Explosive Limits</b>	No data available
<b>Auto-ignition Temperature</b>	No data available
<b>Vapor Pressure</b>	19.30 mm Hg at 70°F (21°C)

<b>Vapor Density</b>	No data available
<b>Relative Density/Specific Gravity</b>	No data available
<b>Solubility(ies)</b>	Insoluble
<b>Partition Coefficient: n-octanol/water</b>	No data available
<b>Auto-ignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	No data available
<b>VOC (Volatile Organic Compounds)</b>	<1 g/L

#### SECTION 10: STABILITY AND REACTIVITY

**Chemical stability:** Stable under normal conditions. Hazardous reactions will not occur.

**Conditions to be avoided:** No specific data.

**Substances to be avoided:** Strong acids, strong bases, strong oxidizing agents.

**Hazardous decomposition products:** Under normal conditions hazardous decomposition products should not be produced.

**Hazardous polymerization:** Under normal conditions hazardous polymerization will not occur.

#### SECTION 11: TOXICOLOGICAL INFORMATION

Toxicity Studies: Bisphenol A-(epichlorhydrin), Bisphenol A epoxy resin

Acute Oral Toxicity: Low toxicity, LD50 >2000 mg/kg.

Acute Dermal Toxicity: Low toxicity, LD50 >2000 mg/kg.

Medical Conditions Aggravated by Overexposure: Pre-existing skin disorders may be aggravated by over-exposure to this product.

##### Potential Chronic Health Effects

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

Target Organs: No known significant effects or critical hazards.

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.

#### SECTION 12: ECOLOGICAL INFORMATION

##### Environmental Effects

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. This product shows a high bioaccumulation potential. Water polluting material. May be harmful to the environment if released in large quantities.

Biodegradability Studies: Bisphenol A-(epichlorhydrin), Bisphenol A epoxy resin

Test	Result	Dose	Inoculum
OECD Derived from OECD 301F (Biodegradation Test)	5%-Not Readily 28 days	20 mg/L Oxygen consumption	No Data

**SECTION 13: DISPOSAL CONSIDERATIONS**

Waste should be disposed of according to local, state, and federal regulations.

The generation of waste should be avoided or minimized wherever possible. Empty containers should be taken to an approved waste handling site for recycling or disposal. Incineration or landfill should only be considered when recycling is not feasible. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Refer to 40 CFR § 261.7 (residues of hazardous waste in empty containers).

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**SECTION 14: TRANSPORT INFORMATION****WARNING**

	UN Number	UN Proper Shipping Name	Transport Hazard Class(es)	Packing Group	Environmental Hazards
<b>DOT</b>	Not Regulated	Not Regulated	Not Regulated	Not Regulated	Not Regulated
<b>IMO/IMDG</b>	Not Regulated	Not Regulated	Not Regulated	Not Regulated	Not Regulated
<b>IATA/CAO</b>	Not Regulated	Not Regulated	Not Regulated	Not Regulated	Not Regulated

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code.

**SECTION 15: REGULATORY INFORMATION**

Country	Regulatory List	Notification
USA	TSCA	Included on Inventory
EU	EINECS	Included on Inventory
Canada	DSL	Included on Inventory
China	SEPA	Included on Inventory
Japan	ENCS	Included on Inventory

OSHA - This product is considered to be a hazardous chemical under 29 CFR 1910.1200.

OSHA/HCS Classification – Irritating material, Sensitizing material.

SARA 302/304/311/312 extremely hazardous substances – No ingredients listed.

SARA 311/312 Hazard Identification - No ingredients listed.

SARA 313 - No ingredients listed.

California Safe Drinking Water & Toxic Enforcement Act (Proposition 65) – WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer. 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
1-chloro-2,3-epoxypropane CAS: 106-89-8	Yes.	Yes.	Yes	No.

**Canada WHMIS** - Class D2B: Material causing other toxic effects.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contain all the information required by the Controlled Products Regulations

**SECTION 16: OTHER INFORMATION**

<b>Scale 0-4</b>		<b>NFPA</b>	<b>HMIS</b>
4 – Severe Hazard	Health	2	2
3 – Serious Hazard	Flammability	1	1
2 – Moderate Hazard	Reactivity	0	0
1 – Slight Hazard			
0 – Minimal Hazard			

**Personal Protection:** Safety goggles, neoprene rubber gloves, vapor respirator

**Prepared by** Kretus, Inc.

**Revision Date** No data available.

**Revision Note** No information available.

**Disclaimer**

The information and recommendations presented herein are accurate to the best of our knowledge. User must conduct their own tests to determine the suitability of these products for their particular purposes and usage. Because of numerous factors affecting results, KRETUS® and its affiliation makes no warranty of any kind, express or implied, including those of merchantability and fitness for purpose, other than material conforms to our applicable current specifications. KRETUS® assumes no legal responsibility for use or reliance on the information contained in this safety data sheet.