1. Section 1 – Identification

Product Name: Liquid Stone Ultra UV – Resin
Product Class: Epoxy Resin
Manufacturer/Supplier: KSRESIN
Supplier: 459 Denver Ave
           Loveland, CO 80538
Telephone: 833-683-0033
Emergency: 800-424-9300 (ChemTrec)

2. Section 2 – Hazard(s) Identification

Form: Viscous Liquid

OSHA/HCS Status: Skin Irritation – Category 2
                 Eye Irritation – Category 2A
                 Skin Sensitization – Category 1
                 Acute Aquatic Toxicity – Category 2
                 Chronic Aquatic Toxicity – Category 2
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Hazard Pictograms:

Emergency Overview: WARNING!
Hazards
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention:
Avoid breathing dust/fume/gas/mist/vapors/spray.
Wash skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Avoid release to the environment.
Wear eye protection/face protection.
Response:
IF ON SKIN: Wash with plenty of soap and water.

IF ON EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If skin irritation or rash occurs: Seek medical advice/attention.
If eye irritation persists: Seek medical advice/attention.
Take off contaminated clothing and wash before reuse.
Collect spillage.

Disposal:
Dispose of contents/container to an approved waste disposal plant.

Description of other hazards:
No data available. See Section 11 for more detailed information on health effects and symptoms.

3. Section 3 – Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propane, 2,2-bis{p-(2,3-epoxypropoxy)phenyl]-, polymers</td>
<td>25085-99-8</td>
<td>90-100%</td>
</tr>
<tr>
<td>Proprietary</td>
<td></td>
<td>&lt; 10%</td>
</tr>
</tbody>
</table>

4. Section 4 – First-Aid Measures

After skin contact: Flush contaminated skin with plenty of water. Wear gloves to remove contaminated clothing and shoes. Continue to flush for 10 minutes. In the event of any complaints or symptoms, avoid further exposure. Wash any contaminated clothing before reuse. For contact with hot product, flush contaminated skin with cold water to help dissipate heat. Cover with gauze and seek medical attention immediately.

After eye contact: Immediately flush eyes with plenty of water for 15 minutes, occasional lifting eyelids. Carefully remove contact lenses if present. Seek medical attention immediately.
After inhalation: Move to fresh air. Keep exposed person warm and at rest. 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 air to give mouth-to-mouth resuscitation. Seek medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and seek medical attention immediately. Maintain an open airway, loosen tight clothing such as collars, ties, belts, or waistbands.

After swallowing: Wash out mouth with water. Remove dentures if any. Move to fresh air. Keep exposed person warm and at rest. If material has been swallowed and the 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. Seek 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 an open airway. Loosen tight clothing such as collars, ties, belts or waistbands.

Protection of First Personnel: In the event of body contact with molten material, immediately cool with running water; do not attempt to remove material from skin. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Notes to Physician: No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Section 5 – Fire-Fighting Measures

Suitable extinguishing agents: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFF) or protein foams may function but will be less effective. Water fog, applied gently, may be used as a blanket for fire extinguishment.

Unsuitable extinguishing agents: Do not use direct water stream. May spread fire.

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.
Special Exposure
Hazard:

Promptly isolate the scene by removing all persons from vicinity of the incident if there is a fire. Smoke may contain the original material in addition to combustion products of varying compositions which may be toxic and/or irritating. Combustion products may include and are not limited to: Phenolics, Carbon monoxide, Carbon dioxide. No action shall be taken involving any personal risk or without suitable training.

Hazard Combustion Products:

Decomposition products may include the following materials: Carbon oxides. Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is emitted when burned without sufficient oxygen.

Flammability of Product:

In a fire or if heated, a pressure increase will occur and the container may burst.

6. Section 6 – Accidental Release Measures

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 (Sec. 8).

Measures for Environmental Protection:

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.

Measures for small spill:

Stop leak if without risk. Move containers from spill area. For molten material, allow the product to cool and solidify. Vacuum or sweep up the material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Measures for large spill:

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, waterways, basements, or confined confined areas. For molten material allow the product to cool and solidify. Vacuum or sweep up the material and place in a designated, labeled waste
container. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

7. Section 7 – Handling and Storage

Handling: Avoid prolonged or repeated contact with skin. Put on appropriate personal protective equipment (Sec. 8). Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breath vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container. Keep container closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse containers. Application of direct flame to a container of liquid epoxy resin can cause explosion and/or fire (Sec. 8).

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 (Sec. 10) and food and drink. 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.

Storage Temperature: 36F – 109F
Shelf Life – Use within 24 months

8. Section 8 – Exposure Controls/Personal Protection

General protective and hygienic measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reuse. Ensure that eyewash stations and safety showers are close to the workstation location.

Breathing Equipment: 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. In most conditions, no respiratory protection should be needed; however, if material is heated or sprayed, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: Organic vap or cartridge with a particulate pre-filter.

**Protection of skin:**
Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Protection of eyes:**
Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mist, gases, or dusts.

### 9. Section 9 – Physical and Chemical Properties

**Form:** Viscous Liquid

**Flash Point:** Closed cup > 507-514°F at 102.89 hPaEC

**Auto-Ignition Temperature:** Not available.

**Flammable limits**
- **Upper:** Not applicable
- **Lower:** Not applicable

**Color:** Colorless, or slightly yellow

**pH:** Not available

**Boiling Point:** 608°F Differential Scanning Calorimetry (DSC) Decomposition

**Relative Density:** 1.16 at 68°F

**Vapor Pressure:** <0.0000001 Pa EC Method A4

**Odor Threshold:** Not available.

**Viscosity:** Dynamic – 11,000 – 14,000 mPa.s at 77°F ASTMD 445

**Water Solubility:** 5.4 – 8.4 mg/L at 68°F EU Method A.6

**Partition coefficient n-Octanaol/Water:** Log Pow: 3.242 Estimated

**Evaporation rate:** Not available.

**Vapor Density:** Not available.

### 10. Section 10 – Stability and Reactivity

**Reactivity:** No data available.
Chemical Stability: The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to Avoid: Avoid short term exposes to temperatures above 300°C. Potentially violent decomposition can occur above 350°C. Avoid prolonged exposure to temperatures above 250°C. Generation of gas during decomposition can cause pressure in closed systems. Pressure build up can be rapid. Avoid contact with oxidizing materials. Avoid contact with: Acids, Bases. Avoid unintentional contact with amines.

Incompatible Materials: Reactive or incompatible with the following materials: oxidizing materials, strong acids, strong alkalis. Avoid unintentional contact with amines.

Hazardous Decomposition Products: Reacts with considerable hot release with some curing agents. Decomposition products depend upon temperature, air supply and the presence of other materials. Gases are released during decomposition. Uncontrolled exothermic reaction of epoxy resins release phenolics, carbon monoxide, and water.

11. Section 11 – Toxicological Information

Acute toxicity

Oral: Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

Dermal: Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Inhalation: At room temperature, exposure to vapor is minimal due to low volatility. Vapor from heated material, mist or aerosols may cause respiratory irritation. The LC50 has not been determined.

Skin Corrosion/irritation: Prolonged contact may cause skin irritation with local redness. Repeated contact may cause skin irritation with local redness.

Sensitization

For similar materials: Has caused allergic skin reactions in humans.

For respiratory sensitization: No relevant data found.

Potential Health Effects

Specific Target Organ Systemic Toxicity (single exposure): Evaluation of available data suggests that this material is not an STOTSE toxicant.
Specific Target: Except for skin sensitization, repeated exposures to low molecular weight epoxy resins of this type are not anticipated to cause any significant adverse effects.

Carcinogenicity: Many studies have been conducted to assess the potential carcinogenicity of diglycidyl ether of bisphenol A (DGEBA). The most recent review of the available data by the International Agency for Research on Cancer (IARC) has concluded that diglycidyl ether of bisphenol A is not classified as a carcinogen.

Teratogenicity: Resins based on the diglycidyl ether of bisphenol A did not cause birth defects or other adverse effects on the fetus when pregnant rabbits were exposed by skin contact, the most likely route of exposure, or when pregnant rats or rabbits were exposed orally.

Reproductive toxicity: In animal studies, did not interfere with reproduction.

Mutagenicity: In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.

Aspiration Hazard: Based on physical properties, not likely to be an aspiration hazard.

Components influencing toxicity: Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymer

Acute inhalation toxicity – The LC50 has not been determined

Alkyl(C12-14) glycidyl ether
Acute inhalation toxicity – Excessive exposure may cause irritation to upper respiratory tract (nose and throat)
LC50 – Rat, 4 hour, vapour, 0.206 mg/l
No deaths occurred following exposure to a saturated atmosphere

12. Section 12 – Ecological Information

Toxicity: Acute toxicity to fish. Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50) between 1 and 10mg/L in the most sensitive species tested.
LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 94 hour, 2mg/L

Acute toxicity to aquatic invertebrates.
EC50, Daphnia Magna (Water Flea), static test, 48 hour, 1.8mg/L

Acute toxicity to algae/aquatic plants
ErC50, Scenedesmus Capricornutum (fresh water algae, static test, 72 hour, growth rate inhibition, 11mg/L)

Toxicity to bacteria
IC50, Bacteria, 18 hour, respiration rates, >42.6mg/L
Chronic aquatic toxicity
Chronic toxicity to aquatic invertebrates
MATC (Maximum Acceptable Toxicant Level), Daphnia magna (Water Flea),
semi-static test, 21 days, number of offspring, 0.55 mg/L

Persistence and degradability:

- Bioedgradability: Based on stringent OECD test guidelines, this material cannot be considered readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.
- 10-day Window: Not applicable
- Biodegradation: 12%
- Exposure time: 28 Days
- Method: OECD Test Guidelines 302B or Equivalent.
- Theoretical Oxygen Demand: 2.35mg/mg Estimated.
- Photodegradation
  - Test Type: Half-Life (indirect photolysis)
  - Sensitizer: OH radicals
  - Atmospheric half-life: 1.92 hour
  - Method: Estimated

Bio accumulative potential:

- Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Lo Pow between 3 and 5

Mobility in soil:

- Potential for mobility in soil is low (Koc between 500 and 2000)
- Given its very low Henry’s constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
- Partition coefficient (Koc): 1800-4400 Estimated.

Section 13 – Disposal Considerations

Waste Disposal:

- The generation of waste should be avoided or minimized wherever possible.
- Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
As your supplier, we have no control over the management practices or manufacturing processes of parties handling or using this material. The information presented here pertains only to the product as shipped in its intended condition as described in the SDS Section: Composition Information. For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.

### 13. Section 14 – Transport Information

<table>
<thead>
<tr>
<th>DOT:</th>
<th>Not regulated for transport</th>
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<tbody>
<tr>
<td>Classification for AIR Transport:</td>
<td>Environmentally hazardous sub-stance, Liquid, N.O.S. (Epoxy Resin)</td>
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<tr>
<td>Proper Shipping Name:</td>
<td>Environmentally hazardous sub-stance, Liquid, N.O.S. (Epoxy Resin)</td>
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<tr>
<td>UN Number:</td>
<td>UN 3082</td>
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<td>Class:</td>
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<td>Packing Group:</td>
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### 14. Section 15 – Regulatory Information

<table>
<thead>
<tr>
<th>US Regulations:</th>
<th>This product is a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA Hazard Communication Standard:</td>
<td></td>
</tr>
<tr>
<td>US Federal Regulations:</td>
<td>SARA Section 313</td>
</tr>
<tr>
<td>This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Titled III, Section 313.</td>
<td></td>
</tr>
<tr>
<td>SARA Sections 311 and 312:</td>
<td>Acute Health Hazard</td>
</tr>
<tr>
<td>United States TSCA Inventory (TSCA):</td>
<td>All components of this product are in compliance with the inventory listing listing requirements of the US Toxic Substances Control Act (TSCA) Chemical Substance Inventory.</td>
</tr>
<tr>
<td>State Regulations:</td>
<td>SARA 301 Extremely Hazardous Substances – None required</td>
</tr>
<tr>
<td>Massachusetts RTK Substances – None required</td>
<td></td>
</tr>
<tr>
<td>New jersey RTK Hazardous Substances – None required</td>
<td></td>
</tr>
<tr>
<td>Pennsylvania RTK Hazardous Substances – To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.</td>
<td></td>
</tr>
<tr>
<td>California Prop. 65:</td>
<td>This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm.</td>
</tr>
</tbody>
</table>
16. Section 16 – Other Information

Hazardous Material Information System III (USA)  
Health: 1 Flammability: 1
Reactivity: 0

Caution: HMIS ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks.

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