1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: .............................  ICE Resin® Part A Resin
CHEMICAL FAMILY: ........................ Epoxy Resin
CHEMICAL NAME: ............................ Bisphenol-A based epoxy resin
FORMULA: ........................................... Not applicable.

MANUFACTURER:                      EMERGENCY TELEPHONE NUMBERS:
Susan Lenart Kazmer, LLC dba ICE Resin Transportation CHEMTREC 800-424-9300 (U.S.)
678 Grand Street                                      703-527-3887 (international)
Vermilion, OH 44089                                  Non-transportation
Phone: (440) 963-0524                               Poison Hotline 800-222-1222
www.iceresin.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING   May cause skin irritation. May cause eye irritation. May cause allergic reaction.
Clear, light blue liquid with mild odor.

PRIMARY ROUTE(S) OF ENTRY: ........................................................ Skin contact.

POTENTIAL HEALTH EFFECTS:

ACUTE INHALATION: ........................................................................... If product is heated, vapors generated can cause headache, nausea, dizziness and possible respiratory irritation if inhaled in high concentrations.

CHRONIC INHALATION: ................................................................... Repeated exposure to high vapor concentrations may cause irritation of pre-existing lung allergies and increase the change of developing allergy symptoms to this product.

ACUTE SKIN CONTACT: .................................................................. May cause allergic skin response in certain individuals. May cause moderate irritation to the skin such as redness and itching.

CHRONIC SKIN CONTACT: ............................................................... May cause sensitization in susceptible individuals. May cause moderate irritation to the skin.

EYE CONTACT: ................................................................................ May cause irritation.

INGESTION: .................................................................................. Low acute oral toxicity.

SYMPTOMS OF OVEREXPOSURE: ................................................. Possible sensitization and subsequent allergic reactions usually seen as redness and rashes.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: .............. Pre-existing skin and respiratory disorders may be aggravated by exposure to this product. Pre-existing lung and skin allergies may increase the chance of developing allergic symptoms to this product.

3. COMPOSITION INFORMATION ON HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENT NAME</th>
<th>CAS #</th>
<th>CONCENTRATION (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers</td>
<td>25085-99-8</td>
<td>60-100</td>
</tr>
<tr>
<td>Phenol-formaldehyde polymer glycidyl ether</td>
<td>28064-14-4</td>
<td>10-30</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

FIRST AID FOR EYES: ................................................................. Flush immediately with water for at least 15 minutes. Consult a physician.

FIRST AID FOR SKIN: ................................................................. Remove contaminated clothing. Wipe excess from skin. Lather with waterless skin cleaner and then wash with warm soap and water. If irritation occurs, get medical attention.

FIRST AID FOR INHALATION: ...................................................... Remove to fresh air and rest if effects occur.

FIRST AID FOR INGESTION: ...................................................... No adverse health effects expected from amounts ingested under normal conditions of use. Seek medical attention if a significant amount is ingested.
5. FIRE FIGHTING MEASURES

FLASH POINT: ................................................................. > 260°F (PMCC)

EXTINGUISHING MEDIA: ........................................................ Foam, carbon dioxide, or dry chemical.

FIRE AND EXPLOSION HAZARDS: ................................................ Burning will generate toxic fumes. Combustion products may include, but are not limited to: oxides of nitrogen, carbon monoxide, carbon dioxide, volatile amines, ammonia, nitric acid. When mixed with sawdust, wood chips, or other cellulosic material, spontaneous combustion can occur under certain conditions. If hardener is spilled into or mixed with sawdust, heat is generated as the air oxidizes the amine. If the heat is not dissipated quickly enough, it can ignite the sawdust.

SPECIAL FIRE FIGHTING PROCEDURES: ...................................... Wear complete fire fighting gear and self-contained breathing apparatus. Cool fire-exposed containers with water spray. Material is not readily combustible unless preheated.

FIRE AND EXPLOSION HAZARDS: During a fire, smoke may contain the original materials in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include, but are not limited to: phenolics, carbon monoxide, carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: ................................................. Stop leak without additional risk. Dike and absorb with inert material (e.g., sand) and collect in a suitable, closed container. Warm, soapy water or non-flammable, safe solvent may be used to clean residual.

7. HANDLING AND STORAGE

STORAGE TEMPERATURE (min./max.): ............................. 40°F (4°C) / 90°F (32°C).

STORAGE: ......................................................................................... Store in tightly closed containers to prevent moisture absorption and loss of volatiles. Store away from heat and open flame.

HANDLING PRECAUTIONS: ...................................................... Ventilate work area. Avoid skin contact. Wash skin thoroughly after handling. Launder contaminated clothing before reuse or discard. Precautionary steps should be taken when curing product in large quantities. When mixed with epoxy curing agents this product causes an exothermic, which in large masses, can produce enough heat to damage or ignite surrounding materials and emit fumes and vapors that vary widely in composition and toxicity.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EYE PROTECTION REQUIREMENTS: ...................................... Wear safety glasses with side shields or chemical splash goggles when exposure is more likely.

SKIN PROTECTION GUIDELINES: .............................................. Wear liquid-proof, chemical resistant gloves (nitrile-butyl rubber, neoprene, butyl rubber or natural rubber) and full body-covering clothing.

RESPIRATORY/VENTILATION REQUIREMENTS: ................. Good room ventilation is usually adequate for most operations. Use respirators when exposure to vapors from heated material or mist is likely, unless determined to be below applicable limits. Use a NIOSH/MSHA approved respirator with organic vapor cartridge.

Note: Susan Lenart Kazmer LLC, dba ICE Resin has conducted an air sampling study using this product or similarly formulated products. The results indicate that the components sampled for (epichlorohydrin) were either so low that they were not detected at all or they were well below OSHA’s permissible exposure levels.

ADDITIONAL PROTECTIVE MEASURES: .............................. Use where there is immediate access to safety shower and emergency eye wash. Provide proper wash/cleanup facilities for proper hygiene. Contact lens should not be worn when working with this material. Generally speaking, working cleanly and following basic precautionary measures will greatly minimize the potential for harmful exposure to this product under normal use conditions.

ADDITIONAL PROTECTIVE MEASURES: .............................. Wash thoroughly after handling. Avoid breathing vapors from heated material. Protective skin cream barriers can be applied to hands in addition to gloves for added protection. Generally speaking, working cleanly and following basic precautionary measures will greatly minimize the potential for harmful exposure to this product under normal use conditions.

OCCUPATIONAL EXPOSURE LIMITS: ................................. Not established for product as whole. Refer to OSHA’s Permissible Exposure Level (PEL) or the ACGIH Guidelines for information on specific ingredients.
9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM: Liquid.
COLOR: Clear
ODOR: Mild
BOILING POINT: No data.
MELTING POINT/FREEZE POINT: No data.
VISCOSITY: No data. (cP)
pH: No data.
SOLUBILITY IN WATER: Insoluble
SPECIFIC GRAVITY: No data.
BULK DENSITY: No data. (pounds/gallon.)
VAPOR PRESSURE: < 1 mmHg @ 20˚C.
VAPOR DENSITY: Heavier than air.
% VOLATILE BY WEIGHT: ASTM D 2369-07 was used to determine the Volatile Content of mixed epoxy resin and hardener. Refer to the hardener's MSDS for information about the total volatile content of the resin/hardener system.

10. STABILITY AND REACTIVITY

STABILITY: Stable.
HAZARDOUS POLYMERIZATION: Will not occur by itself, but masses of more than one pound of product plus an aliphatic amine will cause irreversible polymerization with considerable heat buildup.
INCOMPATIBILITIES: Strong acids and oxidizing agents.
DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide and phenolics may be produced during uncontrolled exothermic reactions or when otherwise heated to decomposition.

11. TOXICOLOGICAL INFORMATION

No specific oral, inhalation or dermal toxicology data is known for this product. Specific toxicology information for a bisphenol-A based epoxy resin present in this product is indicated below:

Oral: LD50 >5000 mg/kg (rats)
Inhalation: No Data.
Dermal: LD50 = 20,000 mg/kg (skin absorption in rabbits)

TERATOLOGY: Diglycidyl ether of bisphenol-A (DGEBA) 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 EFFECTS: DGEBA, in animal studies, has been shown not to interfere with reproduction.

MUTAGENICITY: DGEBA in animal mutagenicity studies were negative. In vitro mutagenicity studies were negative in some cases and positive in others.

CARCINOGENICITY:

NTP: Product not listed.
IARC: Product not listed.
OSHA: Product not listed.

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA, NTP or IARC.

Many studies have been conducted to assess the potential carcinogenicity of diglycidyl ether of bisphenol-A. Although some weak evidence of carcinogenicity has been reported in animals, when all of the data are considered, the weight of evidence does not show that DGEBA is carcinogenic. Indeed, the most recent review of the available data by the International Agency for Research on Cancer (IARC) has concluded that DGEBA is not classified as a carcinogen.
12. **ECOLOGICAL INFORMATION**

Prevent entry into sewers and natural waters. May cause localized fish kill.

Movement and Partitioning:
Bioconcentration potential is low (BCF less than 100 or Log Kow less than 3).

Degradation and Transformation:
Biodegradation under aerobic static laboratory conditions is below detectable limits (i.e., BOD less than 2.5% of theoretical) in 20 days.

Ecotoxicology:
Material is moderately toxic to aquatic organisms on an acute basis. LC50 between 0.1 and 1.0 mg/L in most sensitive species.

13. **DISPOSAL CONSIDERATIONS**

WASTE DISPOSAL METHOD: Evaluation of this product using RCRA criteria shows that it is not a hazardous waste, either by listing or characteristics, in its purchased form. It is the responsibility of the user to determine proper disposal methods.

Incinerate, recycle (fuel blending) or reclaim may be preferred methods when conducted in accordance with federal, state and local regulations.

14. **TRANSPORTATION INFORMATION**

**DOT Non-Bulk**

SHIPPING NAME: Not regulated.
TECHNICAL SHIPPING NAME: Not applicable.
HAZARD CLASS: Not applicable.
U.N./N.A. NUMBER: Not applicable.
Packing GROUP: Not applicable.

**ICAO/IATA**

SHIPPING NAME: Environmentally hazardous substance, liquid, n.o.s.
TECHNICAL SHIPPING NAME: Epoxy Resin.
HAZARD CLASS: Class 9.
U.N. NUMBER: UN3082.
Packing GROUP: PG III.
MARINE POLLUTANT: Yes

**IMDG**

SHIPPING NAME: Environmentally hazardous substance, liquid, n.o.s.
TECHNICAL SHIPPING NAME: Epoxy Resin.
HAZARD CLASS: Class 9.
U.N. NUMBER: UN3082.
Packing GROUP: PG III.
EmS Number: F-A, S-F.
MARINE POLLUTANT: Yes

15. **REGULATORY INFORMATION**

**OSHA STATUS:** Irritant. Possible sensitizer.

**TSCA STATUS:** All components are listed on TSCA Inventory or otherwise comply with TSCA requirements.

**Canada WHMIS Classification:** D2B – Toxic material causing other toxic effects.
ICE Resin® Part A Resin

CEPA Chemical Inventory Status: All components are listed or are otherwise compliant with CEPA requirements.

SARA TITLE III:
SECTION 313 TOXIC CHEMICALS None (de minimis).

STATE REGULATORY INFORMATION:

The following chemicals are specifically listed or otherwise regulated by individual states. For details on your regulatory requirements you should contact the appropriate agency in your state.

COMPONENT NAME
/CAS NUMBER STATE CODE

This product does not contain chemicals known to the state of California to cause cancer, birth defects or other reproductive harm, at levels which would require warning under the statute.

1 These substances are known to the state of California to cause cancer or reproductive harm, or both.

16. OTHER INFORMATION

REASON FOR ISSUE: New product.
PREPARED BY: Susan Lenart Kazmer LLC dba ICE Resin
APPROVED BY: Katrina Bukovac
TITLE: Office Manager
APPROVAL DATE: April 9, 2014
SUPERSEDES DATE: NA
MSDS NUMBER: M1039-14a

The information and recommendations set forth herein are made in good faith and are believed to be accurate as of the date of preparation. Susan Lenart Kazmer LLC makes no warranty, either express or implied, with respect to this information and disclaims all liability from reliance on it.