# RESIN RESEARCH INC.

## S A F E T Y  D A T A  S H E E T

## RESIN RESEARCH EPOXY HARDENERS

### SECTION I - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Resin Research Prepreg Hardener**
**Product Code: Prepreg X and Prepreg U Hardeners**
**HMIS ratings: HEALTH 3, FIRE 1 REACTIVITY 0**
MSDS Number: 116 Date of Prep: **1/31/16**
**Resin Research Inc. 4231 S. Fremont ave. Tucson, AZ 85714**
**Resin Research Inc. 131 Tomahawk Dr #11 Indian Harbor Beach, FL 32937**
Product Type: Amine Polymer Mixture Information: 321-223-5276
**24-Hr. Emergency Phone:** CHEMTEL 800-255-3924 OR 813-248-0585

### SECTION 2 -COMPOSITION AND INFORMATION ON INGREDIENTS

| INGREDIENT | WT% | CAS# |
|---|---|---|
| Aliphatic Amines | 70-75% | (Mixture is a trade secret) |
| Benzyl Alcohol | 20-30% | 100-51-6 |

### SECTION 3 - HAZARDS IDENTIFICATION

EFFECTS OF OVEREXPOSURE:
Acute: Slightly irritating to skin, moderately irritating to eyes. Odor may irritate nose, throat and respiratory tract of some persons.
Chronic: May cause skin sensitization from prolonged and repeated contact.
Carcinogenicity: Early studies with DGEBPA have been negative. The IARC concluded in 1988 that DGEBPA was not classifiable as a carcinogen.

### SECTION 4 - FIRST AID

EMERGENCY AND FIRST AID PROCEDURES:
Eyes: Flush with water for 15 minutes holding eyelids open. Seek medical attention.
Skin: 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.
Inhalation: Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention.
Ingestion: DO NOT INDUCE VOMITING. Vomiting will cause further damage to throat or respiratory tract. Dilute by giving water or milk to drink if victim is conscious. GET IMMEDIATE MEDICAL ATTENTION.
Medical Conditions Generally Aggravated by Exposure: Other than skin sensitization which appears to be permanent, epoxy resin does not appear to cause long term health effects. Nor, does it appear to aggravate other medical conditions.

### SECTION 5 - FIRE AND EXPLOSION HAZARD DATA

Flash Point: > 300°F Method: Pensky-Martens Closed Cup
Flammable Limits in Air By Volume - Lower: N/A Upper: N/A
Extinguishing Media: Foam, Carbon Dioxide, Dry Chemical, Water Fog
Special Firefighting Procedures: When fighting chemical fires wear full protective equipment with self-contained breathing apparatus. Water spray may be used to cool fire-exposed containers. Toxic fumes may be evolved when this substance is burned.
Fire and explosion hazards: Toxic fumes will be involved when material is involved in a fire

### SECTION 6: ACCIDENTAL RELEASE MEASURES

IF MATERIAL IS SPILLED: Avoid all skin contact. Absorb spills with clay, diatomaceous earth, vermiculite or other suitable absorbent material and shovel into waste metal drums.
WASTE DISPOSAL METHOD: Incinerate or bury in approved dumping area in accordance with Federal, State and local regulations.

## SECTION 7: HANDLING AND STORAGE

HANDLING: Application of a direct flame to a container of liquid epoxy hardeners can cause explosion and/or fire.
STORAGE: Recommended pumping and storage temperature is 60C (140F).

## Section 8: EXPOSURE CONTROL/PERSONAL PROTECTION

RESPIRATORY PROTECTION: NIOSH Approved respiratory protection required in absence of proper environmental control. Use amine respiratory cartridge mask or an atmosphere supplying respirator.
VENTILATION: Breathing of vapors should be avoided.This product should be confined as far as possible in sealed or covered containers in which case normal room ventilation should be adequate. Local ventilation will be needed in areas where vapors are expected.
SKIN PROTECTION: Rubber gloves, clean, body covering clothing and footwear.
OTHER PROTECTIVE EQUIPMENT : Splash proof goggles or safety glasses
---------- SPECIAL PRECAUTIONS ----------
Avoid all skin contact.
Avoid spills and inhalation of vapors.
A good standard of personal hygiene and good general housekeeping are essential.
Reseal part used containers after use.
Ensure all containers are correctly labeled to prevent accidental ingestion.
Wash with soap and water before eating, drinking, or using lavatory.
Observe conditions of good industrial hygiene and safe working practice

## SECTION 9: PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Range: not applicable Specific Gravity: 0.9-1.0
Vapor Density: Heavier than Air Material V.O.C.: None
Evaporation Rate: Slower than Ether Water Solubility: Negligible
Appearance and Odor: Clear liquid with ammonia-like odor.

## SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable. Hazardous Polymerization: Will not occur.
Incompatibility: Strong oxidizing agents, Lewis and mineral acids.
Hazardous Decomposition Products: Oxides of carbon and nitrogen, aldehydes, acids
Conditions to Avoid: 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.

## SECTION 11: TOXICOLOGY INFORMATION

Acute toxicity
Oral:
Type of value: LD50
Species: rat
Value: 1,030 mg/kg
Inhalation:
No data available.
Dermal:
No data available. The European Union (EU) has classified this substance as 'harmful'.
Irritation / corrosion
Skin:
Species: rabbit
Result: Corrosive.

Eye:
Species: rabbit
Result: Risk of serious damage to eyes.
Method: OECD Guideline 405
Sensitization:
Guinea pig maximization test
No mutagenic effects reported.
Experimental/calculated data:
Micronucleus assay
No mutagenic effects reported.
Aspiration Hazard:
No aspiration hazard expected.
Species: guinea pig
Result: sensitizing
Method: OECD Guideline 406
Genetic toxicity
Experimental/calculated data:
Ames-test

## SECTION 12: ECOLOGICAL INFORMATION

Fish
Acute:
Directive 84/449/EEC, C.1 semistatic
Leuciscus idus/LC50 (96 h): 110 mg/l
Nominal values (confirmed by concentration control analytics)
Chronic:
Study scientifically not justified.
Aquatic invertebrates
Acute:
OECD Guideline 202, part 1 static
Daphnia magna/EC50 (48 h): 23 mg/l
Nominal values (confirmed by concentration control analytics)
semistatic
Chaetogammarus marinus/EC50 (48 h): 388 mg/l
The details of the toxic effect relate to the nominal concentration.
Chronic:
OECD Guideline 202, part 2 semistatic Daphnia magna (NOEC) 21 d 3 mg/l
Nominal values (confirmed by concentration control analytics)
Aquatic plants
Toxicity to aquatic plants:
Directive 88/302/EEC, part C, p. 89 green algae/EC50 (72 h): > 50 mg/l
Nominal concentration.
Microorganisms
Toxicity to microorganisms:
DIN 38412 Part 8 bacterium/EC10 (18 h): 1,120 mg/l
Nominal concentration.
Degradability / Persistence
Biological / Abiological Degradation
Test method: Directive 92/69/EEC, C.4-A (aerobic),
Method of analysis: DOC reduction
Degree of elimination: 8 % (28 d)
Evaluation: Not readily biodegradable (by OECD criteria).
Hydrolysis
Test method: OECD Guideline 111

Half-life: (50 °C)
Bioaccumulation
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected. Literature data.
Environmental mobility:
Transport between environmental compartments:
calculated adsorption/water - soil
KOC: 928
log KOC: 2.97
Other adverse effects:
Due to the pH-value of the product, neutralization is generally required before discharging sewage into treatment plants. The inhibition of the degradation activity of activated sludge is not anticipated when introduced
to biological treatment plants in appropriate low concentrations.

## SECTION 13: DISPOSAL CONSIDERATIONS

Waste disposal of substance:
Incinerate in a licensed facility. Do not discharge substance/product into sewer system.
Container disposal:
Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

## SECTION 14: TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME: Amine
UN NUMBER: UN2735
CLASS 8
PKG III
DOT HAZARD CLASS: Corrosive Liquid

### DOT

Not Regulated

### TDG

Not Regulated

### MEX

UN?ID# 2735
Corrosive Liquid NOS (Amines)
Class 8
PKG III

### ICAO

UN?ID# 2735
Corrosive Liquid NOS (Amines)
Class 8
PKG III

### IATA code

UN?ID# 2735
Corrosive Liquid NOS (Amines)
Class 8
PKG III

### IMDG Code

UN?ID# 2735
Corrosive Liquid NOS (Amines)
Class 8
PKG III

## RID

UN?ID# 2735
Corrosive Liquid NOS (Amines)
Class 8
PKG III

## ADR

UN?ID# 2735
Corrosive Liquid NOS (Amines)
Class 8
PKG III

## ADN

UN?ID# 2735
Corrosive Liquid NOS (Amines)
Class 8
PKG III

*Emergency PH. # (domestic) 800-225-3924 (international)813-248-0585* Chemtel
MIS0005050
SARA Title III:
This product contains no toxic chemicals subject to the report requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (EPRCA) and of 40 CFR 372.

### SECTION 15: REGULATORY INFORMATION

Federal Regulations
Registration status:
Chemical TSCA, US released / listed
OSHA hazard category: Acute target organ effects reported; Corrosive to skin and/or eyes; Sensitizer
EPCRA 311/312 (Hazard categories): Acute; Chronic

### SECTION 16: OTHER INFORMATION

HMIS RATINGS:
Health 3
Fire 1
Physical Hazard 0
Created: 10/11/2005
Last Updated: 1/31/2016
The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Resin Research Inc. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Resin Research Inc. has been advised of the possibility of such damages.