

# Material Safety Data Sheet

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: : **Super Sap® HVA Hardener**

Product Use Description: : Polyamide Resin for use with Super Sap Epoxy Resins

Company: : Entropy Resins, Inc.  
18525 S Main St  
Gardena, CA 90248

Contact numbers / Emergency: : Los Angeles: (310) 882-2120  
: 24/7 Emergency Hotline: (760) 476-3962  
: Global Response Access Code: 333178

## 2. COMPOSITION/ INFORMATION ON INGREDIENTS

Description – The exact chemical identity of this component is trade secret. This component is > 98% composed of Polyamide Resin.

CAS Number – N/A

Chemical Family: Reactive Polyamide Resins

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous, and/or present at amounts below reportable limits.

## 3. HAZARDS IDENTIFICATION

|                     |   |
|---------------------|---|
| <b>Main Hazards</b> | <b>Irritating to eyes and skin. May cause sensitization by skin contact. Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment</b> |
|---------------------|---|

## 4. FIRST AID MEASURES

Symptoms and effects: Irritation of the skin and eyes.

First Aid - Inhalation: Irritating to respiratory system. Inhalation may cause coughing, tightness of the chest and irritation of the respiratory system. Move the exposed person to fresh air. Seek medical attention.

First Aid - Skin: Irritating to skin. Wash off immediately with plenty of soap and water. Remove contaminated clothing. Seek medical attention if irritation or symptoms persist.

First Aid - Eye: Irritating to eyes. Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention.

First Aid - Ingestion: Rinse mouth thoroughly. DO NOT INDUCE VOMITING. Seek medical attention.

## 5. FIRE FIGHTING MEASURES

Fire Hazards: Burning produces irritating, toxic and obnoxious fumes.

Fire Fighting Extinguishing Media: Dry chemical powder, carbon dioxide, foam, water spray or fog, sand or earth.

Fire Fighting Equipment: Use full protective clothing and self-contained breathing apparatus.

Special Precautions: Toxic gases such as carbon monoxide may be released during fire. Use positive-pressure, self-contained breathing apparatus and full protective clothing.

## 6. ACCIDENTAL RELEASE MEASURES

Super Sap HVA Hardener

MSDS Number: MSDS\_12\_HVA01\_v2\_US Version No.: 02 Revision date: 16-Sept-2011 Print date: 16-Sept-2011

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|                                   |  |
|-----------------------------------|--|
| Personal precautions:             | Avoid all personal contact with skin, eyes and clothing. Ensure adequate ventilation. Wear protective clothing specified for normal operations ( see section 8).   |
| Environmental precautions:        | Do not allow product to enter drains. Prevent further spillage if safe.  |
| Clean-up methods- small spillage: | Absorb or contain liquid with sand, earth or other absorbent spill control material. Shovel material to labelled sealable container for safe disposal. Do not use sawdust, wood chips or other cellulosic materials to absorb the spill, as the possibility for spontaneous combustion exists. Wash spill residue with warm, soapy water if necessary. |
| Large spillage:                   | Transfer to a labelled container for product recovery or safe disposal. Otherwise treat as for small spillage.   |

## 7. HANDLING AND STORAGE

|                       |  |
|-----------------------|--|
| Handling:             | Avoid contact with skin, eyes and clothing. Can cause irritation if vapors are inhaled, moderate skin irritation, eye irritation, and may cause skin and eye burns. Can cause allergic respiratory reaction and allergic skin reaction. Do not breath vapor mist. Do not get in eyes, on skin, or on clothing. |
| Storage:              | Keep container tightly closed and dry to prevent moisture absorption and contamination. Avoid contact with direct sunlight.  |
| Storage temperatures: | Ambient.   |

## 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

|                         |   |
|-------------------------|---|
| Engineering measures:   | Ensure adequate ventilation of the work area.   |
| Respiratory protection: | Not normally required. For high concentrations of fumes from the heated product, an appropriate air purifying respirator should provide adequate protection. The recommended type is for organic acid gas/vapor. In a confined space wear half mask respirator with organic vapour cartridge and build-in particular filter NPF 20 (gas only). If product is applied by spraying wear self contained breathing apparatus. |
| Skin protection:        | Wear impervious chemical resistant gloves (PVC)   |
| Eye protection:         | Approved safety goggles.  |
| Body protection:        | Wear chemical protective clothing.  |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                    |   |
|--------------------|---|
| Physical state:    | Viscous liquid                              |
| Color:             | Amber                                       |
| Odor:              | Characteristic.                             |
| Density:           | .97 – 1.2 g/cm <sup>3</sup> @ 20 °C (68 °F) |
| Flash point:       | > 100 °C                                    |
| Melting Point:     | 110 °C                                      |
| Autoignition temp: | > 200 °C                                    |

## 10. STABILITY/REACTIVITY

|                                   |   |
|-----------------------------------|---|
| Stability:                        | Stable under normal use conditions.                                     |
| Conditions to avoid:              | Avoid contact with direct sunlight.                                     |
| Materials to avoid:               | Strong oxidizing agents, bases, and acids. Caustic soda.                |
| Hazardous decomposition products: | Burning produces irritating, toxic, and obnoxious fumes. Carbon oxides. |

## 11. TOXICOLOGICAL INFORMATION

The total product is not on the International Agency for Research on Cancer (IARC) or National Toxicology Program (NTP) or OSHA lists of carcinogens or potential carcinogens.

**TOXICITY DATA:** The following data on test animals indicate low acute toxicity potential. However, this product is an eye and skin irritant by OSHA criteria.

| COMPONENT       | ROUTE-SPECIES | TEST | DOSAGE | UNITS | IRRITATION DATA                           |
|-----------------|---------------|------|--------|-------|---|
| Polyamide Resin | Oral-rat      | LD50 | 15     | g/kg  | Skin-rabbit Moderate<br>Eye-rabbit Severe |

## 12. ECOLOGICAL INFORMATION

|                 |  |
|-----------------|--|
| Ecotoxicity:    | May cause long-term adverse effects in the aquatic environment |
| Mobility:       | Not available  |
| Degradability:  | Not available  |
| Bioaccumulation | May cause long-term adverse effects in the aquatic environment |

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## 13. DISPOSAL CONSIDERATIONS

|                    |  |
|--------------------|--|
| Precautions:       | See section 8. Refer to section 7 before handling the product or containers.   |
| Waste disposal:    | Recover or recycle product and container, if possible. Otherwise incineration or dispose to licensed contractor in accordance with federal, state and local regulations. |
| Product disposal:  | Drain container thoroughly. Rinse three times with suitable solvent. Treat rinses as for product disposal. After draining, vent in a safe place away from sparks.        |
| Local legislation: | Control of Pollution Act 1974.<br>Control of Pollution ( Special waste) Regulations 1980.<br>Environmental Protection Act 1990.  |

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## 14. TRANSPORT INFORMATION

|                     |   |
|---------------------|---|
| DOT                 | Not regulated as hazardous material by US DOT 49 CFR 172.101 hazardous materials table. |
| IATA                | Not regulated   |
| IMDG                | Not regulated   |
| TDG                 | Not regulated   |
| Further Information | Not dangerous goods   |

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## 15. REGULATORY INFORMATION

### US Federal Regulations:

OSHA: This material safety data sheet (MSDS) has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is considered to be a hazardous chemical under that standard.

Resource Conservation and Recovery Act (RCRA): Not a hazardous waste under RCRA (40 CFR 261)

SARA Title III: Section 313 Toxic Chemical List (TCL): This product does not contain any chemicals for routine annual toxic chemical release reporting under Section 313 (40 CFR 372)

TSCA Section 8(b) – Inventory Status: All chemical components of this product are in compliance with TSCA inventory requirements.

TSCA Section 12(b) – Export Notification: This product does not contain any chemicals that are subject to a Section 12(b)

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## 16. OTHER INFORMATION

Uses and restrictions: - Compositions for the building and civil engineering industries e.g. flooring compounds, primers, adhesives, mortars, joints and grouts  
- Offshore & Marine applications

SDS distribution: This document contains important information to ensure the safe storage, handling and use of this product. The information in this document should be brought to the attention of the person in your organisation responsible for advising on safety matters.

The information supplied in this SDS is designed only as guidance for the safe use, storage, and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process.

Dr. Rey Banatao  
Entropy Resins, Inc.  
18525 S. Main St.  
Gardena, CA  
90248

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**USER'S RESPONSIBILITY / DISCLAIMER OF LIABILITY:** This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as a guarantee of any specific property of the product.

As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of this product. Information contained herein is believed to be true and accurate but all statements or suggestions made without warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. Compliance with all applicable federal, state, and local laws and local regulations remains the responsibility of the user.

This bulletin cannot cover all possible situations that the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. It is your responsibility to develop appropriate work practice guidelines and employee instructional programs for your operation.

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# Material Safety Data Sheet

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## 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: : **Super Sap<sup>®</sup> 100 Epoxy**

Product Use Description: : Modified Liquid Epoxy Resin

Company: : Entropy Resins Inc  
18525 S Main St  
Gardena, CA 90248

Contact numbers / Emergency: : Los Angeles (310) 882-2582  
: 24/7 Emergency Hotline: (760) 476-3962  
: Global Response Access Code: 333178

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## 2. COMPOSITION/ INFORMATION ON INGREDIENTS

Description – The exact chemical identity of this component is trade secret. This component is composed of Epoxidized Pine Oils, Bisphenol A/F type epoxy resin, Benzyl Alcohol, and proprietary reactive epoxy diluents.

CAS Number – N/A

Chemical Family: Epoxy Resin

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous, and/or present at amounts below reportable limits.

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## 3. HAZARDS IDENTIFICATION

**HMIS Hazard Rating:**                      **Health - 2**                                      **Flammability - 1**                                      **Physical Hazards - 0**

**Emergency Overview: May cause allergic skin reaction in susceptible individuals. May cause skin and eye irritation.**

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## 4. FIRST AID MEASURES

Symptoms and effects:                      Irritation of the skin and eyes.

First Aid - Inhalation:                      No specific measures

First Aid - Skin:                              Do not delay. Remove contaminated clothing. Wash skin with water using soap if available. If persistent irritation occurs, obtain medical attention.

First Aid - Eye:                              Do not delay. Flush eye with water. If persistent irritation occurs, obtain medical attention immediately.

First Aid - Ingestion:                      Do not induce vomiting. In the unlikely event of ingestion, obtain medical attention immediately.

Advice to Physicians:                      If skin sensitisation has developed and a causal relationship has been confirmed, further exposure should not be allowed.

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## 5. FIRE FIGHTING MEASURES

Special hazards:                              Not classified as flammable, but will burn. Carbon monoxide may be involved incomplete combustion occurs.

Extinguishing media- small fires:                      Dry chemical powder, carbondioxide foam, water spray or fog, sand or earth.

Large fires:                                      Foam, water spray or fog.

Unsuitable extinguishing media:                      Water in a jet.

Protective equipment:                      Full protective clothing and self contained breathing apparatus.

Other information                              Keep adjacent containers cool by spraying with water.

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## 6. ACCIDENTAL RELEASE MEASURES

Super Sap 100 Epoxy Resin

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|                                   |  |
|-----------------------------------|--|
| Personal precautions:             | Avoid contact with skin, eyes and clothing   |
| Personal protection:              | Wear protective clothing specified for normal operations ( see section 8).   |
| Environmental precautions:        | Prevent contamination of soil and water. Prevent from spreading or entering into drains, ditches or rivers by using sand, earth or other appropriate barriers. If materials enter drains it should be pumped out into a open vessel. Emergency services may need to be called to assist in this operation.                                   |
| Clean-up methods- small spillage: | Absorb or contain liquid with sand, earth or spill control material. Shovel material to labelled sealable container for safe disposal.   |
| Large spillage:                   | Transfer to a labelled container for product recovery or safe disposal. Otherwise treat as for small spillage.   |
| Waste Disposal:                   | At this time, this material or its containers would not be considered hazardous wastes as defined under the federal RCRA regulations (40 CFR 261) if discarded. Care should be taken to ensure that the material or its containers are disposed of in an approved facility in accordance with current federal, state, and local regulations. |

For further information, contact your state or local waste agency or the U.S. Environmental Protection Agency's RCRA hot line (1-800-424-9346 or 202-382-3000).

## 7. HANDLING AND STORAGE

|                       |   |
|-----------------------|---|
| Handling:             | Avoid contact with skin, eyes and clothing  |
| Storage:              | Keep container tightly closed and dry. Palletised loads should be stacked to a maximum of 4 high. |
| Storage temperatures: | Ambient.  |

## 8. EXPOSURE CONTROLS/ personal protection

|                                  |  |
|----------------------------------|--|
| Occupational exposure standards: | None established.  |
| Respiratory protection:          | Not normally required. In a confined space wear half mask respirator with organic vapour cartridge and build-in particular filter NPF 20 ( gas only). If product is applied by spraying wear self contained breathing apparatus. |
| Hand protection:                 | Nitrile rubber gloves or butyl rubber gloves, gauntlet type.   |
| Eye protection:                  | Monogoggles.   |
| Body protection:                 | Standard issue work clothes, safety boots.   |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                       |  |
|---------------------------------------|--|
| Physical state:                       | Liquid   |
| Colour:                               | Clear / Pale yellow                              |
| Odour:                                | Slight   |
| Density:                              | 1100 - 1200 kg/m <sup>3</sup> @ 25 °C ( typical) |
| Dynamic viscosity:                    | 8.0-13.0 Pa.s @ 25 °C                            |
| Flash point:                          | Over 200 °C                                      |
| Solubility in water                   | Negligible                                       |
| N-octanol/water partition coefficient | Data not available                               |

## 10. STABILITY/REACTIVITY

|                                   |   |
|-----------------------------------|---|
| Stability:                        | Stable under normal use conditions. Reacts with strong oxidising agents. Polymerises exothermically with amines, mercaptans and Lewis acids at ambient temperature and above. Polymerises in contact with bases ( eg caustic soda), ammonia, primary and secondary amines, alcohol's and acids. |
| Conditions to avoid:              | Caustic soda can induce a vaporous polymerisation at temperatures over 150 °C.  |
| Materials to avoid:               | Strong oxidising agents. Caustic soda.  |
| Hazardous decomposition products: | Hazardous decomposition products are not expected to form during normal storage.  |

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

Super Sap 100 Epoxy Resin

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Acute toxicity - oral: LD50 > 10000 mg/kg (rat)

Eye irritation: Irritant.  
Skin irritation: Irritant.  
Respiratory irritation: Not irritating.  
Skin sensitisation: Skin sensitizer.  
Carcinogenicity: A recent review of the available data by the International Agency for Research on Cancer (IARC), has concluded that DGEbPA is not classified as a carcinogen.  
Mutagenicity: DGEbPA in animal mutagenicity studies were negative. In vitro mutagenicity tests were negative in some cases and positive in others.

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## 12. ECOLOGICAL INFORMATION

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

Movement and Partitioning: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Kow between 3 and 5).  
Degradation and Transformation: Theoretical oxygen demand is calculated to be 2.35 p/p. 20-day biochemical oxygen demand is <2.5%.  
Ecotoxicology: Material is moderately toxic to aquatic organisms on an acute basis. LC50/EC50 between 1 and 10 mg/L in most sensitive species.

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## 13. DISPOSAL CONSIDERATIONS

Precautions: See section 8. Refer to section 7 before handling the product or containers.  
Waste disposal: Recover or recycle if possible. Otherwise incineration or dispose to licensed contractor.  
Product disposal: Drain container thoroughly. Rinse three times with suitable solvent. Treat rinses as for product disposal. After Draining, vent in a safe place away from sparks and re. Send to drum recovered or metal reclaimed.  
Local legislation: Control of Pollution Act 1974.  
Control of Pollution ( Special waste) Regulations 1980.  
Environmental Protection Act 1990.

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## 14. TRANSPORT INFORMATION

D.O.T. SHIPPING NAME:.....Not regulated by DOT.  
TECHNICAL SHIPPING NAME:.....Not applicable.  
D.O.T. HAZARD CLASS:.....Not applicable.  
U.N./N.A. NUMBER:.....Not applicable.  
PACKING GROUP:.....Not applicable.

## 15. REGULATORY INFORMATION

OSHA STATUS:.....Slight irritant; possible sensitizer.  
TSCA STATUS:.....All components are listed on TSCA inventory or otherwise comply with TSCA requirements.  
SARA TITLE III:  
SECTION 313 TOXIC CHEMICALS.....None (de minimus).  
SARA HAZARD CLASSIFICATION: This material has been categorized as having the following hazard(s) as defined by SARA title III regulations (40 CFR 370): acute, chronic.

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## 16. OTHER INFORMATION

Uses and restrictions: - Compositions for the building and civil engineering industries e.g. flooring compounds, primers, adhesives, mortars, joints and grouts  
- Offshore & Marine applications

Super Sap 100 Epoxy Resin

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SDS distribution:

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As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of this product. Information contained herein is believed to be true and accurate but all statements or suggestions made without warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. Compliance with all applicable federal, state, and local laws and local regulations remains the responsibility of the user.

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