

# MATERIAL SAFETY DATA SHEET

System Three Resins, Inc.

3500 W. Valley Hwy N; Suite 105

Auburn, Washington 98001

## SECTION I - PRODUCT IDENTIFICATION

Product Name: WR-LPU  
MSDS Number: 20006  
Product Type: Water/Polyurethane Resin Mixture  
**24-hr Emergency Phone:**  
**CHEMTREC (800) 424-9300**

Date of Preparation: 8/18/00  
Previous Revision: 3/2/00  
Reason Revised: New Address  
Information: 253-333-8118  
Prepared By: B. Cowman

**Hazard Ratings:**  
**Health 1**  
**Fire 1**  
**Reactivity 0**

## SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT	WT%	CAS NO.	OSHA-PEL	ACGIH-TLV
n-Methyl Pyrrolidone	1-5	872-50-4	none established	none established
Glycol Ether DE Acetate	1-5	121-44-8	none established	none established
Propylene Glycol	1-5	00057-55-6	10 mg/m <sup>3</sup>	none established

## SECTION III - PHYSICAL PROPERTIES

BOILING RANGE: 190-212°F  
SPECIFIC GRAVITY: 1.10-1.14  
EVAPORATION RATE: Slower than Ether  
APPEARANCE AND ODOR: Thin liquid, clear or colored, with mild, characteristic odor.

VAPOR DENSITY: Heavier than Air  
MATERIAL V.O.C.: 100-250 g/l  
WATER MISCIBILITY: Complete

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point: N/A (Water Solution) Method: N/A  
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.

## SECTION V - HEALTH HAZARD DATA

### EFFECTS OF OVEREXPOSURE:

Eye Contact: May cause severe irritation.  
Inhalation: May cause irritation to nose, throat, or lungs.  
Ingestion: May cause gastrointestinal irritation.  
Skin Contact: May cause irritation.

Chronic: Prolonged and repeated exposure to m-methyl pyrrolidone may cause skin irritation.

Carcinogenicity: This product and its components are not listed as carcinogens by OSHA, NTP, or IARC.

### EMERGENCY AND FIRST AID PROCEDURES:

Eye Contact: Flush thoroughly with water for at least 15 minutes. If irritation persists, get medical attention.  
Inhalation: Remove to fresh air. Administer oxygen if necessary. Get medical attention if breathing is difficult or cough develops.  
Ingestion: DO NOT INDUCE VOMITING. Give one or two glasses of water or milk to drink. If irritation persists, get medical attention.

**WR-LPU (cont.)**

Skin Contact: Remove contaminated clothing and flood area with water. Wash affected area with soap and water. Wash clothing before reuse. Discard shoes. Get medical attention if redness, soreness, or blistering occur or persist.

Medical Conditions Generally Aggravated by Exposure: None known.

**SECTION VI - REACTIVITY DATA**

Stability: Stable

Conditions to Avoid: None known.

Incompatibility (Materials to avoid): Strong oxidizing agents, mineral acids.

Hazardous Decomposition Products: Oxides of carbon, nitrogen.

Hazardous Polymerization: Will not occur.

**SECTION VII – SPILL OR LEAK PROCEDURES**

Steps to be taken if material is spilled or released:

Avoid contact with material. Persons not wearing appropriate protective equipment should leave the area of the spill until cleanup is complete. Stop spill at source, dike area to prevent spreading, pump liquid to salvage tank or drum. Remaining liquid may be taken up on clay, diatomaceous earth, sawdust, or other absorbent, and shoveled into disposal containers.

Waste Disposal Method: Waste is not hazardous by RCRA criteria. (40 CFR 261). Place in an appropriate disposal facility in compliance with local regulations.

**SECTION VIII - SPECIAL PROTECTION INFORMATION**

Respiratory Protection: NIOSH approved respirator is required when spraying this material. For emergencies, a self contained breathing apparatus or full-faced respirator is recommended.

Ventilation: Provide adequate ventilation in work areas. Confine material in sealed containers when not in use.

Hand Protection: Always wear impervious gloves, neoprene, vinyl or rubber.

Eye Protection: Splash proof goggles or safety spectacles with side shields are recommended. Always wear eye protection when sanding cured material to avoid dust in eyes.

Other Protective Equipment: Wear clean, body-covering clothing to avoid skin contact.

**SECTION IX - TRANSPORTATION REQUIREMENTS**

Department of Transportation Classification: Not Regulated

Other Requirements:

SARA Title III Section 313:

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372:

<u>CAS NO.</u>	<u>CHEMICAL NAME</u>	<u>WEIGHT %</u>
872-50-4	n-Methyl Pyrrolidone	1-5

The information contained herein is based on the data available to us and is believed to be correct. However, System Three Resins, Inc. makes no warranty, expressed or implied, regarding the accuracy of these data or the results to be obtained from the use thereof. System Three assumes no responsibility for injury from the use of the product described herein.

# MATERIAL SAFETY DATA SHEET

System Three Resins, Inc.

3500 W. Valley Hwy N; Suite 105

Auburn, Washington 98001

## SECTION I - PRODUCT IDENTIFICATION

Product Name: **LPU Crosslinker**  
MSDS Number: 20022  
Product Type: Aziridine Solution  
**24-hr Emergency Phone:**  
**Chemtec: (800) 424-9300**

Date of Prep: 8/18/00  
Previous Revision: 3/2/00  
Prepared By: B. Cowman  
Reason Revised: New Address  
Information: 253-333-8118

**HMIS Ratings:**  
**Health** 2\*  
**Fire** 1  
**Reactivity** 1

## SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

COMPONENT	AMOUNT	CAS NUMBER	OSHA PEL	ACGIH TLV
Pentaerythritol-tris-(B-(Aziridinyl) propionate)	60-70%	57116-45-7	not established	not established
Diethylene glycol mono-ethyl ether acetate	30-40%	112-15-2	not established	not established

## SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Range: 400°F  
Vapor Density: Heavier than Air Material  
Evaporation Rate: Slower than Ether  
Appearance and Odor: Thin, amber liquid, with characteristic odor.

Specific Gravity: 9.35 #/gal  
V.O.C.: 370 grams/liter  
Water Solubility: Total

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point: > 235°F Method: Cleveland Closed Cup  
Flammable Limits in Air By Volume - Lower: 1.0% Upper: 19.0%  
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.

## SECTION V - REACTIVITY DATA

Stability: Stable, however the acetate portion has formed explosive peroxides when evaporation occurs under conditions of high heat (200 °F).  
Hazardous Polymerization: May occur in the presence of mineral acids releasing heat.  
Incompatibility: Strong oxidizing agents, mineral acids.  
Hazardous Decomposition Products: Oxides of carbon, nitrogen.  
Conditions to Avoid: Acids and oxidizing agents, heat.

## SECTION VI - HEALTH HAZARD DATA

### EFFECTS OF OVEREXPOSURE:

Acute: May cause irritation to skin and severe irritation to eyes. Slightly toxic by ingestion.

Chronic: Prolonged and repeated skin contact may cause skin sensitization or other allergic responses.

Carcinogenicity: Positive results were obtained in a battery of short term, in-vitro genotoxicity assays. (Ames, CHO/HGPRT, Cell transformation) for the aziridine ingredient.

## LPU Crosslinker (cont.)

### EMERGENCY AND FIRST AID PROCEDURES

**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) can not be decontaminated and should be destroyed.

**Eyes:** Flush with plenty of water for at least 15 minutes. Seek immediate medical attention.

**Inhalation:** Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention.

**Ingestion:** Induce vomiting. Get immediate medical attention.

**Medical Conditions Generally Aggravated by Exposure:** This material may be a skin sensitizer in certain susceptible persons. Sensitized persons are not known to have other health problems as a result of sensitization.

### SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

**If Material is Spilled:** Ventilate area. Avoid contact with material. Persons not wearing appropriate protective equipment should leave the area of the spill until cleanup is complete. Stop spill at source, dike area to prevent spreading, pump liquid to salvage tank or drum. Remaining liquid may be taken up on clay, diatomaceous earth, sawdust, or other absorbent, and shoveled into disposal containers.

**Waste Disposal Method:** Waste is not hazardous by RCRA criteria (40 CFR 261). Place in an appropriate disposal facility in compliance with local regulations.

### SECTION VIII - SPECIAL PROTECTION INFORMATION

**Respiratory Protection:** Normally none is required when adequate ventilation is provided. In the absence of proper environmental control NIOSH approved respiratory is required. For emergencies, a self contained breathing apparatus or full-faced respirator is recommended. **Ventilation:** Provide adequate ventilation in work areas. Confine material in sealed containers when not in use.

**Hand Protection:** Always wear impervious gloves, neoprene, vinyl or rubber.

**Eye Protection:** Splash proof goggles or safety spectacles with side shields are recommended. Always wear eye protection when sanding cured epoxy resins to avoid dust in eyes.

**Other Protective Equipment:** Wear clean, body-covering clothing to avoid skin contact.

### SECTION IX - TRANSPORTATION REQUIREMENTS

**Department of Transportation Classification:** Not Hazardous

**D.O.T. Proper Shipping Name:** Not Regulated

**Other Requirements:**

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 and of 40 CFR 372.

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