Type 5 Flooring System		
Proper Name	**Use within System**	**Name on General MSDS List**
101 Resin (SR 101 and SH101)	Body matrix for Aggregate Build Coat(s)	SR101 and SH 101
Resin 405	Chemical Resistant Epoxy Hardener	CRH 405
Flakes	Aggregates and System Color	Chips
TRP354	Body Matrix	TRP354

SeamTek® Type 5 Epoxy Flake

(Healthcare)

1. Product Description

Basic use

SeamTek® Type 5 epoxy flooring is composed of two component 100% solids, low-odor, low VOC resins that chemically cure to form a rigid and highly abrasion resistant binder for high performance interior floor finishes with a flake aggregate design. Type 5 is designed to be an aesthetic alternate to Types 3 & 4; otherwise it is the same flooring system except that the aggregate is acrylic flake in lieu of color quartz. Type 5 is often used when a different "look" is desired by the end user.

SeamTek® Type 5 flooring has been specifically designed to cure with no air release problems that can cause subsequent cleaning problems. The resin component (SR101) is designed to work with several selected hardeners to serve as a high performance matrix. The seal coat hardener (CRH405) assures outstanding chemical resistance when compared to other CR epoxy products. SeamTek® Type 5 flooring is ideal for many areas within Healthcare Facilities.

Type 5 can be installed over a sloping slab or a sloping mortar to enhance the flow of water to the drain(s). Sloping is recommended in all wet areas since flooring that is immersed under constantly ponding water and chemicals tends to deteriorate faster than flooring under alternate use conditions. Unless otherwise specified, Type 5 will follow the contour(s) of the existing substrate and can not be used as a stand alone system to correct such problems.

As with any flooring system, environmental conditions surrounding the installation are important. Ambient temperatures need to be between 65 and 80 F degrees with slab temperatures at or above 65 degrees F; humidity must be below 70%. These conditions can be tough to achieve in certain new construction scenario but if they are not achieved the installation may suffer aesthetically and the resins may not performed as designed. Consequently LSP can not be responsible for the performance of the flooring system installed under adverse conditions.

Features and benefits include:

- Excellent Clarity of the Matrix
- Excellent Chemical Resistance
- Excellent adhesion to concrete
- Good workability – easy to spread
- 100% solids – harmful solvent free
- Low VOC
- Low odor
- Low flammability
- High Taber Resistance

The LSP SeamTek® systems in general are composed of resins and aggregates which utilize the best available technology for safety, performance and lowest environmental impact. All products and systems are extensively field tested prior to use on SeamTek® projects.

2. General Information and Handling

Limitations

Type 5 is sensitive to moisture migration through the substrate to the underside of the floor. Concrete substrates should be checked for moisture migration using ASTM F 1869-98 calcium chloride test. If moisture test results are 3 pounds and over we recommend moisture remediation. SeamTek® floors must not be used to bridge moving cracks or joints. Non-moving cracks or joints that must be over coated require rigid repairs. Epoxy flooring in general is subject to

discoloration from UV light therefore care should be taken to avoid placement in from of unprotected windows and UV insect lights. Surface or air temperature must be between 65°F minimum and 80°F maximum and relative humidity below 70%. Lower temperatures will extend cure time and higher temperatures will reduce pot and work life. Chemical resistance as depicted in the specification is a relative classification and we recommend testing the chemicals you use in your facility on test flooring samples before making your final selection.

Storage and Handling

Because SeamTek® epoxies have a flash point above 200°F (93°C), transportation, storage and handling are less restricted.

Product Health and Safety Information

Refer to container labels and Material Safety Data Sheets available from LSP for health, safety and environmental information. If necessary, call LSP at (800) 638-9874.

Applicable Standards

LSP SeamTek® clear epoxy resins have been tested in accordance with American Society for Testing and Materials (ASTM) methods. Refer to Table 1on page 1 for more information. SeamTek® Type 4 can be used in food processing areas and other similar applications. The USDA and FDA no longer regulate coatings used on floors, walls, and ceilings in food process areas, since the surfaces are not intended for food contact.

Mixing

Caution, containers used to measure SeamTek® epoxy resin and Harder must be marked appropriately and only used to measure the indicated component. Container used to mix both resin and hardener must be cleaned or changed after mixing each batch to avoid residual material affecting viscosity and cure rates.

Measure both parts by volume 2 to 1 into plastic marked containers. Pour resin and hardener into a separate container and agitate using a jiffy paddle and low speed drill (400-600 rpm). Agitate for 2 minutes, and then scrape sides of container and mix for an additional minute. Avoid generating air bubbles and foam. Consider mixing small batches to reduce potential waste. To avoid exothermic reaction in mixing container, do not let mixed components sit in container. Immediately, pour the mixed epoxy binder resin onto the floor to be coated. Spread or finish material according to application instructions contained in LSP Technical Manual.

3. Warranty

SeamTek® Systems are installed by LSP Associate Contractors and are available with the LSP Single Source Limited Warranty for Labor and Material. This Product Data Sheet is for your information and is neither a contract nor a product warranty. Your installation contract is provided by your LSP Associate Contractor. LSP's warranty to you is made solely in the LSP Single Source Limited Warranty for Labor and Material. Contact your Associate Contractor for the specific warranty document.

4. Maintenance

SeamTek® Systems are hard seamless surfaces that will provide years of life with little maintenance. For more detailed maintenance instructions, please request LSP Floor Maintenance Instructions. Periodic inspections by your LSP Associate Contractor are recommended to discuss ways to extend the life of the floor care.

Material Components/Ratios and Spread Rates

The resins and ratios are as follows:

1) Cove base mix: **SR101 and SH101 in 2:1** mix ratio as above. Mix 1 ½ quarts (three pints) of mixed liquid with 11 quarts of quartz or 50 mesh sand. Once cured, seal the cove base and broadcast flakes into the neat resin.
2) 1st broadcast neat resin: Mix **SR101 and SH101** at a **2:1** ratio as above and apply with a v-notch trowel @ 72 sq ft per gallon.
3) 2nd broadcast neat resin; **SR101 and SH101 in a 2:1** ratio and spread @ 72 sq ft/gal spread rate
4) Seal coat: Trowel neat **resin SR101 and hardener CRH405** in a 2:1 ratio at a spread rate of 72 sq ft/gal
5) Depending on the desired skid resistance there may be a second seal coat mixed as #6 above with a spread rate of 300+ sq ft/gal

Material Safety Data Sheet CRH405

Effective Date: 08/01/01 | Previous Revision date: 00/00/0000 | Date Printed: 9/14/2015

SECTION 1 Product and Company Information

PRODUCT NAME: SeamTek® Chemical Resistant Hardener, CRH405

GENERIC NAME: Epoxy Hardener

DISTRIBUTOR: LSP Performance Resins
124 Speer Road
Chestertown, MD 21620

Chemtrec
24 Hour Emergency Number 1-800-424-9300
Information Number: 1-800-666-6216

Comments: To the best of our knowledge, this Material Safety Data Sheet conforms to the requirements of US OSHA 29 CFR1910.1200, 91/155/ECC and Canadian Hazardous Products Act

SECTION 2 Hazards Identification

Emergency Overview
OSHA Hazardous
Target Organ Effect: Skin Sensitizer, Irritant
Target Organs: Respiratory, eyes, Skin
Physical Appearance: Viscous liquid
Immediate Concerns: Skin Irritation

Potential Health Effects
Skin: Will cause irritation and dermatitis, repeated overexposure will cause dermatitis and sensitization. Sensitized persons may experience rapid irritation of skin upon exposure.
Inhalation and Ingestion: Irritation to system

Carcinogenicity:
Not listed by NTP
Not Listed by IARC
Not Listed by OSHA

Reproductive Toxicity
Reproductive Effects : Not Available
Teratogenic Effects: Not Available

Signs and Symptoms of Overexposure: Irritation of Skin

Medical Conditions Aggravated:
Allergy, Skin Disorders

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

Health		Environmental	Physical
Acute Toxicity, Oral	Category 5	Not Classified	Not Classified
Skin Irritant	Category 2		
Serious Eye Damage	Category 1		
Skin Sensitization	Category 1		

Pictogram:

Signal Word Danger

Hazard Statements		Precautionary Statements
H303	May be harmful if swallowed	P280 Wear protective gloves/protective clothing/eye protection/face protection
H315	Causes skin irritation	P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
H317	May cause an allergic skin reaction	
H318	Causes serious eye damage	

SECTION 3 Composition / Information on Ingredients

Chemical Name	CAS	Wt%
Modified cycloaliphatic polyamines	Trade secret	
Benzyl alcohol	100-51-6	

SECTION 4 First Aid Measures

EYE CONTACT: Get medical attention immediately. Immediately flush eyes gently with large amounts of water, holding lids open for at least 20-30 minutes, retracting eyelids often. Check for, and remove contact lenses.
SKIN CONTACT: Get medical attention immediately. Flush contaminated skin with plenty of WATER. Do NOT wash with solvents. Wash contaminated clothing thoroughly with water before removing it or wear gloves. Continue to rinse for at least 10 minutes. May cause irritation and allergic reaction. Seek medical advice if irritation develops or persists.
INHALATION: Move exposed person to fresh air. Get medical attention immediately. If it is suspected that fumes are still present, the rescuer should wear an appropriate make of self contained breathing apparatus. Keep person warm and at rest. If not breathing or 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. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway
INGESTION: Get medical attention immediately. Wash out mouth with water. Move exposed person to fresh air. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

Advice to physicians: Symptomatic and supportive therapy as needed. May aggravate skin conditions.

SECTION 5 Fire Fighting Measures

Conditions of Flammability
Not flammable or combustible
Suitable Extinguishing Media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Hazardous Decomposition Products
Hazardous decomposition products formed under fire conditions – Carbon Oxides
Fire Fighting Instructions
Do not enter fire area without proper protection. Wear self contained breathing apparatus (pressure-demand MSHA/NIOSH) approved or equivalent. See Section 10 - decomposition products possible. Fight fire from safe distance/protected location. Heat/impurities may increase temperature/build pressure/rupture closed containers, spreading fire, increasing risk of burns/injuries. Use water spray/fog for cooling.

SECTION 6 Accidental Release Measures

Personal Precautions
No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental Precautions
Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers. Notify authorities of any releases to sewers, soils, waterways or air.

Methods and Materials for Containment and Cleaning Up
Stop the leak if it can be done without risk. Move containers from the spill area. Prevent entry into sewers, water ways or soils. Contain and collect spillage with non-combustible, absorbent material such as sand, earth, vermiculite or diatomaceous earth. Place in container for disposal according to local regulations via a licensed waste disposal contractor. Contaminated absorbent materials may pose the same hazards as the spilled product. See section 1 for emergency contact information and section 13 for waste disposal.

SECTION 7 Handling and Storage

Precautions for Safe Handling Can cause skin and eye irritation and allergic skin reaction.

Put on appropriate personal protective equipment (see section 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. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Conditions for Safe 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 (see section 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 no store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8 Exposure Controls / Personal Protection

EXPOSURE GUIDELINES

Hazardous Component	PEL	STEL	TLV	Other
Modified cycloaliphatic polyamines	NE	NE	NE	NE
Benzyl alcohol	NE	NE	NE	NE

ENGINEERING CONTROLS Use local exhaust ventilation to maintain airborne concentrations below exposure limits. Respiratory protection may be required in addition to general room ventilation.

PERSONAL PROTECTIVE EQUIPMENT Use a properly fitted, air-purifying or air supplied 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 or the product and the safe working limits of the selected respirator.

EYE PROTECTION Eye protection such as chemical splash goggles and/or face shield must be worn when possibility exists for eye contact due to splashing or spraying liquid, airborne particles or vapor. Contact lenses should not be worn.

SKIN AND BODY PROTECTION When skin contact is possible, protective clothing including gloves, apron, sleeves, boots, head and face protection should be worn. Gloves should be impervious neoprene or rubber. Use of barrier cream is recommended. Clean equipment thoroughly after each use. Discard contaminated leather shoes and canvas sneakers.

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OTHER HYGENIC PRACTICES Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

OTHER WORK PRACTICES Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet facilities. Promptly remove soiled clothing and wash thoroughly before reuse. Shower after work using plenty of soap and water.

SECTION 9 Physical and Chemical Properties

Appearance Form Color pH Melting/Freezing Temperature Boiling Point	 Liquid Light amber Not available 40 C/ 104 F 336 C/ 637 F
Flash Point	> 95 C/ 200 F
Ignition Temperature	Not available
Autoignition Temperature Lower explosive limit; na	Not available Upper explosive limit: na
Vapor Pressure	<0.1 mm Hg
Vapor Density (air=1)	Not available
Specific Gravity (water=1 @39.2F)	>1.01
Evaporation Rate (Bac=1)	None
Odor	amine
Odor threshold	Not available

SECTION 10 Stability and Reactivity

Chemical Stability
Stable under recommended storage conditions

Possibility of Hazardous Reactions
No data available

Conditions to Avoid
Avoid strong acids, bases in bulk and elevated temperatures

Materials to Avoid
Reactive or incompatible with: acids, oxidizers, amines

Hazardous Decomposition Products
Decomposition products formed under fire conditions may include: Carbon oxides, Nitrogen oxides, Aldehydes.

SECTION 11 Toxicological Information

Acute Toxicity

Oral LD50	Rat > 4000 mg/kg.
Dermal LD50	Rabbit 20,000 mg/kg
Inhalation LC50	No data available

Skin Corrosion/Irritation
Skin Irritant

Serious Eye Damage/Eye Irritation

Eye	Irritant
Eyes	Rabbit

Severe eye irritation – 24 H

Respiratory or Skin Sensitization
May cause skin or respiratory sensitization

Mutagenicity

Mouse	Skin

Carcinogenic by RTECS Criteria
liver, ovarian, thyroid

Carcinogenicity

IARC: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC

ACGIH: No component of this product presents at levels greater than or equal to 0.1% is identified as carcinogen or potential carcinogen by ACGIH

NTP: No component of this product presents at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP

SECTION 12 Ecological Information

Aquatic Ecotoxicity
No data available

Biodegradability
Persistant Not readily biodegradable

Mobility in soil
No data available

SECTION 13 Disposal Considerations

Waste Disposal
The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residuals. This material and its container must be disposed of in a safe way. 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.

SECTION 14 Transport Information

DOT (US)

Not Regulated

IMDG

Not Regulated

TDG

Not Regulated

SECTION 15 Regulatory Information

TSCA Inventory Status

All components are listed or exempt

OSHA Hazards

Skin Sensitizer Irritant
Corrosive Material

HMIS Classification		NFPA Rating
Health Hazard;	3	3
Flammability	1	0
Physical Hazards	0	0

Sara Title III: Section 311/312 Hazard Class

Acute Health Hazard, Chronic Health Hazard

Sara Title III: Section 313 (40CFR370)

This product does not contain a chemical which is listed in Section 313 at or above the de minimus concentrations

Cercla Information (40CFR302.4)

This material contains no hazardous or extremely hazardous substances at or above the de minimus concentrations as defined by CERCLA or SARA Title III, and release is therefore not reportable.

California Proposition 65 Information:

This product contains, no listed substances known to the state of California to cause cancer and/or reproductive toxicity.

SECTION 16 Other Information

Some of the information presented and conclusions drawn herein are from sources other than direct test data on the product itself. The information in this MSDS was obtained from sources, which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable. This MSDS has been prepared in accordance with the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

LSP PERFORMANCE RESINS 124 Speer Road Chestertown, MD 21620
800.638.9874 FAX 410.778.3625 web www.lspinc.com

MATERIAL SAFETY DATA SHEET

SECTION 1 IDENTIFICATION

CLIFFORD W. ESTES CO., INC
40 VREELAND AVE STE 104
TOTOWA, NJ 07512

DATE: JANUARY 2005

PHONE: 973.890.1515

PRODUCT BRAND NAME: PERMACOLOR SURFACE AGGREGATES, REGULAR AND HP

PRODUCT IDENTIFICATION : BROADCAST(MED.&FINE), TROWEL-RITE (REGULAR AND SUPER), VARIOUS COLORS

CHEMICAL NAME: SILICON DIOXIDE (SIO2)

DEPARTMENT OF TRANSPORTATION: SAND, GRAVEL, NOIBN

CHEMICAL FAMILY: SILICA SAND COLOR: TYPICAL COLORS

SECTION II HAZARDOUS INGREDIENTS

CHEMICAL NAME	% WT	CAS#	OSHA (PEL)	ACGIH (TLV)
SILICA SAND	94	14808-60-7		.1MG/M3
RESIN	4.95	NON-HAZARDOUS PROPRIETARY	N/A	N/A
TIO2	0.99	13463-67-7		
COL0RANTS ORGANIC AND INORGANIC	0.06	NON-HAZARDOUS		

* Special Statement regarding Hazardous ingredients:

Although these products are composed primarily of Silica Sand (SIO2), and such sand is potentially a source for respirable dust, the sand particles are thoroughly encapsulated in a coating which captures all dust and should, under normal circumstances, prevent any normal release of silica dust to the workplace. See page two, Section VIII for further information on handling.

SECTION III PHYSICAL DATA

BOILING POINT: NONE
VAPOR PRESSURE: NONE
VAPOR DENSITY: NONE
% VOLATILES :<1%
APPEARANCE: SAND OR AGGREGATE, TYPICAL COLORS

SPECIFIC GRAVITY: 2.65
PH: INERT
EVAPORATION RATE: N/A
SOLUBILITY IN WATER: INSOLUBLE

HIMS RATINGS

HEALTH	0*
FLAMABILITY	0
REACTIVITY	0

*REFER TO SPECIAL STATEMENT ABOVE

SECTION IV FIRE AND EXPLOSION HAZARD

FLASH POINT: NON-FLAMMABLE FLAMMABLE LIMITS: LEL- N/A , UEL - N/A

UNUSUAL FIRE AND EXPLOSION HAZARDS: Products of combustion may include irritating gases.

SECTION V HEALTH AND SAFETY

THRESHOLD LIMIT VALUE: (SEE PAGE ONE)

EFFECTS OF OVER EXPOSURE: Prolonged inhalation of mineral dust may cause delayed lung injury.

EMERGENCY AND FIRST AID PROCEDURES: - EYES, Remove in the same manner as one would remove any foreign particle.

SECTION VI REACTIVITY DATA

STABILITY: Stable INCOMPATIBILITY: Dissolves in hydroflouric acid

CONDITIONS TO AVOID: None Known

SECTION VII SPILL/LEAK PROCEDURES

1. Clean up using dustless procedures. Use water and/or vacuum.

2. WASTE DISPOSAL: Dispose using locally approved waste disposal sites.

SECTION VIII SPECIAL PROTECTION

Use of this product under normal and recommended conditions and specifications will pose no known hazards. However, if surfaces using this product are subjected to sanding or grinding as might occur for maintenance purposes, and such treatment produces respirable dust, then proper ventilation and breathing apparatus should be used. Under such conditions, NIOSH-BOM approved respirators should be worn.

GLOVES: Optional EYE PROTECTION: Full eye zone goggles should be worn.

SECTION IX SPECIAL PRECAUTIONS

1. USE DUSTLESS PROCEDURES DURING HANDLING, STORAGE, AND CLEAN-UP

2. PRACTICE GOOD HOUSEKEEPING. MAINTAIN VENTILATION. POST WARNING TO EMPLOYEES WHERE PRODUCT IS USED, STORED, AND HANDLED.

Material Safetv Data Sheet SH101

Effective Date: 10/29/2012 Previous Revision date: 00/00/0000 Date Printed: 9/14/2015

SECTION 1 Product and Company Information

PRODUCT NAME: SeamTek ® Standard Hardener, SH101
GENERIC NAME: Epoxy Hardener

DISTRIBUTOR: LSP Performance Resins
124 Speer Road
Chestertown, MD 21620

Chemtrec
24 Hour Emergency Number 1-800-424-9300
Information Number: 1-800-666-6216

Comments: To the best of our knowledge, this Material Safety Data Sheet conforms to the requirements of US OSHA 29 CFR1910.1200, 91/155/ECC and Canadian Hazardous Products Act

SECTION 2 Hazards Identification

Emergency Overview
OSHA Hazardous
Target Organ Effect: Skin Sensitizer, Irritant
Target Organs: Respiratory, eyes, Skin
Physical Appearance: Viscous liquid
Immediate Concerns: Skin Irritation

Potential Health Effects
Skin: Will cause irritation and dermatitis, repeated overexposure will cause dermatitis and sensitization. Sensitized persons may experience rapid irritation of skin upon exposure.
Inhalation and Ingestion: Irritation to system

Carcinogenicity:
Not listed by NTP
Not Listed by IARC
Not Listed by OSHA

Reproductive Toxicity
Reproductive Effects : Not Available
Teratogenic Effects: Not Available

Signs and Symptoms of Overexposure: Irritation of Skin

Medical Conditions Aggravated:
Allergy, Skin Disorders

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

Health		Environmental	Physical
Acute Toxicity, Oral	Category 5	Not Classified	Not Classified
Skin Irritant	Category 2		
Serious Eye Damage	Category 1		
Skin Sensitization	Category 1		

Pictogram:

Signal Word Danger

Hazard Statements	Precautionary Statements
H303 Maybe harmful if swallowed H315 Causes skin irritation H317 May cause an allergic skin reaction H318 Causes serious eye damage	P280 Wear protective gloves/protective clothing/eye protection/face protection P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

SECTION 3 Composition / Information on Ingredients

Chemical Name	CAS	Wt%
polyoxalkyleneamine	9046100	
Triethylene glycol diamine	929599	
Epoxy curing agent	mixture	
Alkyl phenol	84852153	
Alpha hydroxyl toluene	100-51-6	

SECTION 4 First Aid Measures

EYE CONTACT: Get medical attention immediately. Immediately flush eyes gently with large amounts of water, holding lids open for at least 20-30 minutes, retracting eyelids often. Check for, and remove contact lenses.
SKIN CONTACT: Get medical attention immediately. Flush contaminated skin with plenty of WATER. Do NOT wash with solvents. Wash contaminated clothing thoroughly with water before removing it or wear gloves. Continue to rinse for at least 10 minutes. May cause irritation and allergic reaction. Seek medical advice if irritation develops or persists.
INHALATION: Move exposed person to fresh air. Get medical attention immediately. If it is suspected that fumes are still present, the rescuer should wear an appropriate make of self contained breathing apparatus. Keep person warm and at rest. If not breathing or 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. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway
INGESTION: Get medical attention immediately. Wash out mouth with water. Move exposed person to fresh air. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

Advice to physicians: Symptomatic and supportive therapy as needed. May aggravate skin conditions.

SECTION 5 Fire Fighting Measures

Conditions of Flammability

Not flammable or combustible

Suitable Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Hazardous Decomposition Products

Hazardous decomposition products formed under fire conditions – Carbon Oxides

Fire Fighting Instructions

Do not enter fire area without proper protection. Wear self contained breathing apparatus (pressure-demand MSHA/NIOSH) approved or equivalent. See Section 10 - decomposition products possible. Fight fire from safe distance/protected location. Heat/impurities may increase temperature/build pressure/rupture closed containers, spreading fire, increasing risk of burns/injuries. Use water spray/fog for cooling.

SECTION 6 Accidental Release Measures

Personal Precautions

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental Precautions

Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers. Notify authorities of any releases to sewers, soils, waterways or air.

Methods and Materials for Containment and Cleaning Up

Stop the leak if it can be done without risk. Move containers from the spill area. Prevent entry into sewers, water ways or soils. Contain and collect spillage with non-combustible, absorbent material such as sand, earth, vermiculite or diatomaceous earth. Place in container for disposal according to local regulations via a licensed waste disposal contractor. Contaminated absorbent materials may pose the same hazards as the spilled product. See section 1 for emergency contact information and section 13 for waste disposal.

SECTION 7 Handling and Storage

Precautions for Safe Handling Can cause skin and eye irritation and allergic skin reaction.

Put on appropriate personal protective equipment (see section 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. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Conditions for Safe 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 (see section 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 no store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8 Exposure Controls / Personal Protection

EXPOSURE GUIDELINES

Hazardous Component	PEL	STEL	TLV	Other
polyoxalkyleneamine	NE	NE	NE	NE
Triethylene glycol diamine	NE	NE	NE	NE
Epoxy curing agent	NE	NE	NE	NE
Alkyl phenol	NE	NE	NE	NE
Alpha hydroxyl toluene	NE	NE	NE	NE

ENGINEERING CONTROLS Use local exhaust ventilation to maintain airborne concentrations below exposure limits. Respiratory protection may be required in addition to general room ventilation.

PERSONAL PROTECTIVE EQUIPMENT Use a properly fitted, air-purifying or air supplied 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 or the product and the safe working limits of the selected respirator.

EYE PROTECTION Eye protection such as chemical splash goggles and/or face shield must be worn when possibility exists for eye contact due to splashing or spraying liquid, airborne particles or vapor. Contact lenses should not be worn.

SKIN AND BODY PROTECTION When skin contact is possible, protective clothing including gloves, apron, sleeves, boots, head and face protection should be worn. Gloves should be impervious neoprene or rubber. Use of barrier cream is recommended. Clean equipment thoroughly after each use. Discard contaminated leather shoes and canvas sneakers.

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OTHER HYGENIC PRACTICES Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

OTHER WORK PRACTICES Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet facilities. Promptly remove soiled clothing and wash thoroughly before reuse. Shower after work using plenty of soap and water.

SECTION 9 Physical and Chemical Properties

Appearance Form Color pH Melting/Freezing Temperature Boiling Point	 Liquid Colorless to Amber Not available 40 C/ 104 F 336 C/ 637 F
Flash Point	> 95 C/ 200 F
Ignition Temperature	Not available
Autoignition Temperature Lower explosive limit; na	Not available Upper explosive limit: na
Vapor Pressure	<0.1 mm Hg
Vapor Density (air=1)	Not available
Specific Gravity (water=1 @39.2F)	1.14 at 25 C/77F
Evaporation Rate (Bac=1)	None
Odor	Light possible phenol
Odor threshold	Not available

SECTION 10 Stability and Reactivity

Chemical Stability

Stable under recommended storage conditions

Possibility of Hazardous Reactions

No data available

Conditions to Avoid

Avoid strong acids, bases in bulk and elevated temperatures

Materials to Avoid

Reactive or incompatible with: acids, oxidizers, amines

Hazardous Decomposition Products

Decomposition products formed under fire conditions may include: Carbon oxides, Nitrogen oxides, Aldehydes.

SECTION 11 Toxicological Information

Acute Toxicity

Oral LD50	Rat > 4000 mg/kg.
Dermal LD50	Rabbit 20,000 mg/kg
Inhalation LC50	No data available

Skin Corrosion/Irritation

Skin Irritant

Serious Eye Damage/Eye Irritation

Eye Irritant

Eyes Rabbit

Severe eye irritation – 24 H

Respiratory or Skin Sensitization

May cause skin or respiratory sensitization

Mutagenicity

Mouse Skin

Carcinogenic by RTECS Criteria

liver, ovarian, thyroid

Carcinogenicity

IARC: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC

ACGIH: No component of this product presents at levels greater than or equal to 0.1% is identified as carcinogen or potential carcinogen by ACGIH

NTP: No component of this product presents at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP

SECTION 12 Ecological Information

Aquatic Ecotoxicity

No data available

Biodegradability

Persistant Not readily biodegradable

Mobility in soil

No data available

SECTION 13 Disposal Considerations

Waste Disposal

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residuals. This material and its container must be disposed of in a safe way. 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.

SECTION 14 Transport Information

DOT (US)

Not Regulated

IMDG

Not Regulated

TDG

Not Regulated

SECTION 15 Regulatory Information

TSCA Inventory Status

All components are listed or exempt

OSHA Hazards

Skin Sensitizer Irritant
Corrosive Material

HMIS Classification		NFPA Rating
Health Hazard;	3	3
Flammability	1	0
Physical Hazards	0	0

Sara Title III: Section 311/312 Hazard Class

Acute Health Hazard, Chronic Health Hazard

Sara Title III: Section 313 (40CFR370)

This product does not contain a chemical which is listed in Section 313 at or above the de minimus concentrations

Cercla Information (40CFR302.4)

This material contains no hazardous or extremely hazardous substances at or above the de minimus concentrations as defined by CERCLA or SARA Title III, and release is therefore not reportable.

California Proposition 65 Information:

This product contains, no listed substances known to the state of California to cause cancer and/or reproductive toxicity.

SECTION 16 Other Information

Some of the information presented and conclusions drawn herein are from sources other than direct test data on the product itself. The information in this MSDS was obtained from sources, which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable. This MSDS has been prepared in accordance with the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

LSP PERFORMANCE RESINS 124 Speer Road Chestertown, MD 21620
800.638.9874 FAX 410.778.3625 web www.lspinc.com

Material Safetv Data Sheet SR101

Effective Date: 10/29/2012 Previous Revision date: 00/00/0000 Date Printed: 9/14/2015

SECTION 1 Product and Company Information

PRODUCT NAME: SeamTek ® Standard Resin, SR101
GENERIC NAME: Epoxy Resin

DISTRIBUTOR: LSP Performance Resins
124 Speer Road
Chestertown, MD 21620

Chemtrec
24 Hour Emergency Number 1-800-424-9300
Information Number: 1-800-666-6216

Comments: To the best of our knowledge, this Material Safety Data Sheet conforms to the requirements of US OSHA 29 CFR1910.1200, 91/155/ECC and Canadian Hazardous Products Act

SECTION 2 Hazards Identification

Emergency Overview
OSHA Hazardous
Target Organ Effect: Skin Sensitizer, Irritant
Target Organs: Respiratory, eyes, Skin
Physical Appearance: Viscous liquid
Immediate Concerns: Skin Irritation

Potential Health Effects
Skin: Will cause irritation and dermatitis, repeated overexposure will cause dermatitis and sensitization. Sensitized persons may experience rapid irritation of skin upon exposure.
Inhalation and Ingestion: Irritation to system

Carcinogenicity:
Not listed by NTP
Not Listed by IARC
Not Listed by OSHA

Reproductive Toxicity
Reproductive Effects : Not Available
Teratogenic Effects: Not Available

Signs and Symptoms of Overexposure: Irritation of Skin

Medical Conditions Aggravated:
Allergy, Skin Disorders

GHS Label Elements, including Precautionary Statements

Health		Environmental	Physical
Acute Toxicity, Oral	Category 5	Not Classified	Not Classified
Skin Irritant	Category 2		
Serious Eye Damage	Category 1		
Skin Sensitization	Category 1		

Pictogram:

Signal Word Danger

Hazard Statements	Precautionary Statements
H303 Maybe harmful if swallowed H315 Causes skin irritation H317 May cause an allergic skin reaction H318 Causes serious eye damage	P280 Wear protective gloves/protective clothing/eye protection/face protection P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

SECTION 3 Composition / Information on Ingredients

Chemical Name	CAS	Wt%
diglycidyl ether bisphenol A epoxy resin	25085-99-8	
Aliphatic epoxide	68609-97-2	
Alkylated phenol	AN123581	
2-methyl-2,4-pentanediol	107-41-5	
Alkyl phenol	84852153	

SECTION 4 First Aid Measures

EYE CONTACT: Get medical attention immediately. Immediately flush eyes gently with large amounts of water, holding lids open for at least 20-30 minutes, retracting eyelids often. Check for, and remove contact lenses.

SKIN CONTACT: Get medical attention immediately. Flush contaminated skin with plenty of WATER. Do NOT wash with solvents. Wash contaminated clothing thoroughly with water before removing it or wear gloves. Continue to rinse for at least 10 minutes. May cause irritation and allergic reaction. Seek medical advice if irritation develops or persists.

INHALATION: Move exposed person to fresh air. Get medical attention immediately. If it is suspected that fumes are still present, the rescuer should wear an appropriate make of self contained breathing apparatus. Keep person warm and at rest. If not breathing or 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. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway

INGESTION: Get medical attention immediately. Wash out mouth with water. Move exposed person to fresh air. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

Advise to physicians: Symptomatic and supportive therapy as needed. May aggravate skin conditions.

SECTION 5 Fire Fighting Measures

Conditions of Flammability

Not flammable or combustible

Suitable Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Hazardous Decomposition Products

Hazardous decomposition products formed under fire conditions – Carbon Oxides

Fire Fighting Instructions

Do not enter fire area without proper protection. Wear self contained breathing apparatus (pressure-demand MSHA/NIOSH) approved or equivalent. See Section 10 - decomposition products possible. Fight fire from safe distance/protected location. Heat/impurities may increase temperature/build pressure/rupture closed containers, spreading fire, increasing risk of burns/injuries. Use water spray/fog for cooling.

SECTION 6 Accidental Release Measures

Personal Precautions

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental Precautions

Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers. Notify authorities of any releases to sewers, soils, waterways or air.

Methods and Materials for Containment and Cleaning Up

Stop the leak if it can be done without risk. Move containers from the spill area. Prevent entry into sewers, water ways or soils. Contain and collect spillage with non-combustible, absorbent material such as sand, earth, vermiculite or diatomaceous earth. Place in container for disposal according to local regulations via a licensed waste disposal contractor. Contaminated absorbent materials may pose the same hazards as the spilled product. See section 1 for emergency contact information and section 13 for waste disposal.

SECTION 7 Handling and Storage

Precautions for Safe Handling

Can cause skin and eye irritation and allergic skin reaction.

Put on appropriate personal protective equipment (see section 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. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not

reuse container.

Conditions for Safe 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 (see section 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 no store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8 Exposure Controls / Personal Protection

EXPOSURE GUIDELINES

Hazardous Component	PEL	STEL	TLV	Other
diglycidyl ether bisphenol A epoxy resin	NE	NE	NE	NE
Aliphatic epoxide	NE	NE	NE	NE
Alkylated phenol	NE	NE	NE	NE
2-methyl-2,4-pentanediol	25 ppm	NE	25 ppm	NE
Alkyl phenol	NE	NE	NE	NE

ENGINEERING CONTROLS Use local exhaust ventilation to maintain airborne concentrations below exposure limits. Respiratory protection may be required in addition to general room ventilation.

PERSONAL PROTECTIVE EQUIPMENT Use a properly fitted, air-purifying or air supplied 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 or the product and the safe working limits of the selected respirator.

EYE PROTECTION Eye protection such as chemical splash goggles and/or face shield must be worn when possibility exists for eye contact due to splashing or spraying liquid, airborne particles or vapor. Contact lenses should not be worn.

SKIN AND BODY PROTECTION When skin contact is possible, protective clothing including gloves, apron, sleeves, boots, head and face protection should be worn. Gloves should be impervious neoprene or rubber. Use of barrier cream is recommended. Clean equipment thoroughly after each use. Discard contaminated leather shoes and canvas sneakers.

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OTHER HYGENIC PRACTICES Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

OTHER WORK PRACTICES Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet facilities. Promptly remove soiled clothing and wash thoroughly before reuse. Shower after work using plenty of soap and water.

SECTION 9 Physical and Chemical Properties

Appearance	
Form	Liquid
Color	Colorless to Amber
pH	Not available
Melting/Freezing Temperature	40 C/ 104 F
Boiling Point	336 C/ 637 F
Flash Point	> 95 C/ 200 F
Ignition Temperature	Not available
Autoignition Temperature	Not available
Lower explosive limit; na	Upper explosive limit: na
Vapor Pressure	<0.1 mm Hg
Vapor Density (air=1)	Not available
Specific Gravity (water=1 @39.2F)	1.14 at 25 C/77F
Evaporation Rate (Bac=1)	None
Odor	Light possible phenol
Odor threshold	Not available

SECTION 10 Stability and Reactivity

Chemical Stability

Stable under recommended storage conditions

Possibility of Hazardous Reactions

No data available

Conditions to Avoid

Avoid strong acids, bases in bulk and elevated temperatures

Materials to Avoid

Reactive or incompatible with: acids, oxidizers, amines

Hazardous Decomposition Products

Decomposition products formed under fire conditions may include: Carbon oxides, Nitrogen oxides, Aldehydes.

SECTION 11 Toxicological Information

Acute Toxicity

Oral LD50	Rat > 4000 mg/kg.
Dermal LD50	Rabbit 20,000 mg/kg
Inhalation LC50	No data available

Skin Corrosion/Irritation

Skin	Irritant

Serious Eye Damage/Eye Irritation

Eye	Irritant
Eyes	Rabbit

Severe eye irritation – 24 H

Respiratory or Skin Sensitization

May cause skin or respiratory sensitization

Mutagenicity

Mouse	Skin

Carcinogenic by RTECS Criteria
liver, ovarian, thyroid

Carcinogenicity

IARC: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC

ACGIH: No component of this product presents at levels greater than or equal to 0.1% is identified as carcinogen or potential carcinogen by ACGIH

NTP: No component of this product presents at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP

SECTION 12 Ecological Information

Aquatic Ecotoxicity

No data available

Biodegradability

Persistant	Not readily biodegradable

Mobility in soil

No data available

SECTION 13 Disposal Considerations

Waste Disposal

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residuals. This material and its container must be disposed of in a safe way. 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.

SECTION 14 Transport Information

DOT (US)

Not Regulated

IMDG

Not Regulated

TDG

Not Regulated

SECTION 15 Regulatory Information

TSCA Inventory Status

All components are listed or exempt

OSHA Hazards

Skin Sensitizer Irritant

Corrosive Material

HMIS Classification		NFPA Rating	
Health Hazard;	2		2
Flammability	1		0
Physical Hazards	0		0

Sara Title III: Section 311/312 Hazard Class

Acute Health Hazard, Chronic Health Hazard

Sara Title III: Section 313 (40CFR370)

This product does not contain a chemical which is listed in Section 313 at or above the de minimus concentrations

Cercla Information (40CFR302.4)

This material contains no hazardous or extremely hazardous substances at or above the de minimus concentrations as defined by CERCLA or SARA Title III, and release is therefore not reportable.

California Proposition 65 Information:

This product contains, no listed substances known to the state of California to cause cancer and/or reproductive toxicity.

SECTION 16 Other Information

Some of the information presented and conclusions drawn herein are from sources other than direct test data on the product itself. The information in this MSDS was obtained from sources, which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable. This MSDS has been prepared in accordance with the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

LSP PERFORMANCE RESINS 124 Speer Road Chestertown, MD 21620

Material Safety Data Sheet TRP354

Effective Date: 07/15/96 | Previous Revision date: 00/00/0000 | Date Printed: 9/14/2015

SECTION 1 Product and Company Information

PRODUCT NAME: SeamTek® Topcoat Resin TRP354 (all colors)
GENERIC NAME: Pigmented Epoxy Resin

DISTRIBUTOR: LSP Performance Resins
124 Speer Road
Chestertown, MD 21620

Chemtrec
24 Hour Emergency Number 1-800-424-9300
Information Number: 1-800-666-6216

Comments: To the best of our knowledge, this Material Safety Data Sheet conforms to the requirements of US OSHA 29 CFR1910.1200, 91/155/ECC and Canadian Hazardous Products Act

SECTION 2 Hazards Identification

Emergency Overview
OSHA Hazardous
Target Organ Effect: Skin Sensitizer, Irritant
Target Organs: Respiratory, eyes, Skin
Physical Appearance: Viscous liquid
Immediate Concerns: Skin Irritation

Potential Health Effects
Skin: Will cause irritation and dermatitis, repeated overexposure will cause dermatitis and sensitization. Sensitized persons may experience rapid irritation of skin upon exposure.
Inhalation and Ingestion: Irritation to system

Carcinogenicity:
Not listed by NTP
Not Listed by IARC
Not Listed by OSHA

Reproductive Toxicity
Reproductive Effects : Not Available
Teratogenic Effects: Not Available

Signs and Symptoms of Overexposure: Irritation of Skin

Medical Conditions Aggravated:
Allergy, Skin Disorders

GHS Label Elements, including Precautionary Statements

Health		Environmental	Physical
Acute Toxicity, Oral	Category 5	Not Classified	Not Classified
Skin Irritant	Category 2		
Serious Eye Damage	Category 1		
Skin Sensitization	Category 1		

Pictogram:

Signal Word Danger

Hazard Statements	Precautionary Statements
H303 May be harmful if swallowed H315 Causes skin irritation H317 May cause an allergic skin reaction H318 Causes serious eye damage	P280 Wear protective gloves/protective clothing/eye protection/face protection P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

SECTION 3 Composition / Information on Ingredients

Chemical Name	CAS	Wt%
Diglycidyl ether bisphenol A epoxy resin	25085-99-8	
Aliphatic epoxide	Mixture	
Salt of unsat'd amides and acidic esters	Mixture	
Barium sulfate	7727-43-7	5-10
Alpha hydroxide toluene	100-51-6	
Methyl n-amyl ketone	110-43-0	0-2

SECTION 4 First Aid Measures

EYE CONTACT: Get medical attention immediately. Immediately flush eyes gently with large amounts of water, holding lids open for at least 20-30 minutes, retracting eyelids often. Check for, and remove contact lenses.
SKIN CONTACT: Get medical attention immediately. Flush contaminated skin with plenty of WATER. Do NOT wash with solvents. Wash contaminated clothing thoroughly with water before removing it or wear gloves. Continue to rinse for at least 10 minutes. May cause irritation and allergic reaction. Seek medical advice if irritation develops or persists.
INHALATION: Move exposed person to fresh air. Get medical attention immediately. If it is suspected that fumes are still present, the rescuer should wear an appropriate make of self contained breathing apparatus. Keep person warm and at rest. If not breathing or 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. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway
INGESTION: Get medical attention immediately. Wash out mouth with water. Move exposed person to fresh air. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

Advice to physicians: Symptomatic and supportive therapy as needed. May aggravate skin conditions.

SECTION 5 Fire Fighting Measures

Conditions of Flammability
Not flammable or combustible
Suitable Extinguishing Media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Hazardous Decomposition Products
Hazardous decomposition products formed under fire conditions – Carbon Oxides
Fire Fighting Instructions
Do not enter fire area without proper protection. Wear self contained breathing apparatus (pressure-demand MSHA/NIOSH) approved or equivalent. See Section 10 - decomposition products possible. Fight fire from safe distance/protected location. Heat/impurities may increase temperature/build pressure/rupture closed containers, spreading fire, increasing risk of burns/injuries. Use water spray/fog for cooling.

SECTION 6 Accidental Release Measures

Personal Precautions
No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental Precautions
Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers. Notify authorities of any releases to sewers, soils, waterways or air.

Methods and Materials for Containment and Cleaning Up
Stop the leak if it can be done without risk. Move containers from the spill area. Prevent entry into sewers, water ways or soils. Contain and collect spillage with non-combustible, absorbent material such as sand, earth, vermiculite or diatomaceous earth. Place in container for disposal according to local regulations via a licensed waste disposal contractor. Contaminated absorbent materials may pose the same hazards as the spilled product. See section 1 for emergency contact information and section 13 for waste disposal.

SECTION 7 Handling and Storage

Precautions for Safe Handling Can cause skin and eye irritation and allergic skin reaction.

Put on appropriate personal protective equipment (see section 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. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Conditions for Safe 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 (see section 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 no store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8 Exposure Controls / Personal Protection

EXPOSURE GUIDELINES

Hazardous Component	PEL	STEL	TLV	Other
Diglycidyl ether bisphenol A epoxy resin	NE	NE	NE	NE
Aliphatic epoxide	NE	NE	NE	NE
Salt of unsat'd amides and acidic esters	NE	NE	NE	NE
Barium sulfate	10 mg/m3	NE	10 mg/m3	NE
Alpha hydroxide toluene	NE	NE	NE	NE
Methyl n-amyl ketone	NE	NE	NE	NE

ENGINEERING CONTROLS Use local exhaust ventilation to maintain airborne concentrations below exposure limits. Respiratory protection may be required in addition to general room ventilation.

PERSONAL PROTECTIVE EQUIPMENT Use a properly fitted, air-purifying or air supplied 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 or the product and the safe working limits of the selected respirator.

EYE PROTECTION Eye protection such as chemical splash goggles and/or face shield must be worn when possibility exists for eye contact due to splashing or spraying liquid, airborne particles or vapor. Contact lenses should not be worn.

SKIN AND BODY PROTECTION When skin contact is possible, protective clothing including gloves, apron, sleeves, boots, head and face protection should be worn. Gloves should be impervious neoprene or rubber. Use of barrier cream is recommended. Clean equipment thoroughly after each use. Discard contaminated leather shoes and canvas sneakers.

OTHER HYGENIC PRACTICES Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

OTHER WORK PRACTICES Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet facilities. Promptly remove soiled clothing and wash thoroughly before reuse. Shower after work using plenty of soap and water.

SECTION 9 Physical and Chemical Properties

Appearance	
Form	Viscous Liquid
Color	various
pH	Not available
Melting/Freezing Temperature	N/A
Boiling Point	N/A
Flash Point	>200 F
Ignition Temperature	Not available
Autoignition Temperature	Not available
Lower explosive limit; na	Upper explosive limit: na
Vapor Pressure	Not available
Vapor Density (air=1)	Not available
Specific Gravity (water=1 @39.2F)	1.4
Evaporation Rate (Bac=1)	None
Odor	Mild, sweet
Odor threshold	Not available

SECTION 10 Stability and Reactivity

Chemical Stability
Stable under recommended storage conditions

Possibility of Hazardous Reactions
No data available

Conditions to Avoid
Avoid strong acids, bases in bulk and elevated temperatures

Materials to Avoid
Reactive or incompatible with: acids, oxidizers, amines

Hazardous Decomposition Products
Decomposition products formed under fire conditions may include: Carbon oxides, Nitrogen oxides, Aldehydes.

SECTION 11 Toxicological Information

Acute Toxicity

Oral LD50	Rat > 4000 mg/kg.
Dermal LD50	Rabbit 20,000 mg/kg
Inhalation LC50	No data available

Skin Corrosion/Irritation
Skin Irritant

Serious Eye Damage/Eye Irritation
Eye Irritant
Eyes Rabbit
Severe eye irritation – 24 H

Respiratory or Skin Sensitization
May cause skin or respiratory sensitization

Mutagenicity
Mouse Skin
Carcinogenic by RTECS Criteria
liver, ovarian, thyroid

Carcinogenicity

IARC: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC

ACGIH: No component of this product presents at levels greater than or equal to 0.1% is identified as carcinogen or potential carcinogen by ACGIH

NTP: No component of this product presents at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP

SECTION 12 Ecological Information

Aquatic Ecotoxicity
No data available

Biodegradability
Persistant Not readily biodegradable

Mobility in soil
No data available

SECTION 13 Disposal Considerations

Waste Disposal
The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residuals. This material and its container must be disposed of in a safe way. 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.

SECTION 14 Transport Information

DOT (US)

Not Regulated

IMDG

Not Regulated

TDG

Not Regulated

SECTION 15 Regulatory Information

TSCA INVENTORY STATUS

All components are listed or exempt

OSHA HAZARDS

Skin Sensitizer Irritant
Corrosive Material

HMIS Classification		NFPA Rating
Health Hazard;	1	1
Flammability	1	0
Physical Hazards	0	0

SARA TITLE III: Section 311/312 Hazard Class

Acute Health Hazard, Chronic Health Hazard

SARA TITLE III: Section 313 (40CFR370)

Barium sulfate is listed in SARA III, part 372, section 313

CERCLA Information (40CFR302.4)

This material contains no hazardous or extremely hazardous substances at or above the de minimus concentrations as defined by CERCLA or SARA Title III, and release is therefore not reportable.

California Proposition 65 Information:

This product contains, no listed substances known to the state of California to cause cancer and/or reproductive toxicity.

SECTION 16 Other Information

Some of the information presented and conclusions drawn herein are from sources other than direct test data on the product itself. The information in this MSDS was obtained from sources, which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable. This MSDS has been prepared in accordance with the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

LSP PERFORMANCE RESINS 124 Speer Road Chestertown, MD 21620
800.638.9874 FAX 410.778.3625 web www.lspinc.com