

<i>UTEK UVF Flooring System</i>		
Proper Name	Use within System	Name on General MSDS List
Resin 200C and 200 ISO	Grout	200C and 200 ISO
UTEK Parts A, B and C	Flooring Resin and Flake Base	UTEK A, B and C
UTEK Color Concentrate	Color	UTEK Color Concentrate
Flakes	Aggregate and System Color	Chips
UV13	UV resin	UV 13
TRP-354	Topcoat Resin	TRP-354

UTEK UV-F Healthcare Flooring

1. Product Description

Basic use

U-tek flooring systems are developed to provide moisture tolerant flooring options while incorporating functional flooring resins for chemical resistance, skid resistance and thermal relief. The aliphatic urethane cement base floor with the ultra-violet UV-F wear course upper system is excellent for use in OR Suites and Sterile Fill or other areas that are subject to substrate moisture, high impact, chemical resistance, staining and subject to thermal changes.

U-tek UV-F flooring is a hybrid flooring system composed of urethane, epoxy, and vinyl ester resins that are styrene free using flake broadcast for texture and color. *U-tek* UV-F is composed of LOW or NO VOC resins and as such is LEED compliant. Because of the nature of seal coat activation system the performance properties of the resin are enhanced by the cure.

U-tek UV-F flooring has been specifically designed to cure within seconds at such an advanced level so as to allow you to use of the flooring for chemical exposure and weight loads as soon as it is cured with no waiting. The system has excellent thermal properties and impact resistance.

The activator utilized in the seal coat resin (UV-13) is added and pre mixed in controlled conditions at the factory and does not require field proportioning to achieve maximum performance. Since the activator is a monomer, the guess work related to the accurate addition and mixing of final product has been removed. The predictability of the seal coat performance is greatly enhanced by these unique traits.

This *U-tek* system can be installed over a sloping slab or may be used in combination with other systems to slope and 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 wet/dry conditions. Unless otherwise specified, *U-tek* UV-F will follow the contour(s) of the existing substrate and can not be used as a stand alone system to correct such problems. UV-F specifically is not recommended for wet heavy abuse areas.

As with any flooring system, environmental conditions surrounding the installation are important. Ambient temperatures need to be above 45 F degrees with slab temperatures at or above 60 degrees F; humidity must be below 75%. 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.

The initial layer is a urethane cement and as such is not sensitive to moisture migration through the substrate at reasonable levels. Concrete substrates should be checked for moisture migration using ASTM F 1869-98 calcium chloride test prior to installation to assure they are not extreme.

Features and benefits include:

- Clear
- No amber change by UV
- Low HAP
- Low VOC
- LEED Compliant
- 100% solids – solvent free
- Excellent Bond Strength
- Excellent Chemical Resistance
- Excellent Thermal properties
- Excellent impact resistance
- High Taber Resistance

The LSP Performance 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 live projects.

Limitations

LSP Performance flooring must not be used to bridge moving cracks or joints. The UV-F System is not recommended for wet heavy abuse areas. Non-moving cracks or joints that must be over coated require rigid repairs. N2 flooring is not subject to discoloration from UV light therefore. Surface or air temperature must be between 45°F minimum and 80°F maximum and relative humidity below 75%. Lower temperatures will extend cure time and higher temperatures will reduce pot life 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.

2. General Information and Handling

Storage and Handling

Store at temperatures above 60 degrees F.

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 resins have been tested in accordance with American Society for Testing and Materials (ASTM) methods. 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

The use of proper PPE is required when mixing catalysts.

Measure the resin into plastic marked containers. Add liquids and agitate using a jiffy paddle and low speed drill (400-600 rpm). Agitate for 2 minutes, then add the powders slowly, mixing continuously to get a flow able mix. 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 binder resin onto the floor to be coated. Spread or finish material according to application instructions contained in LSP Technical Manual.

3. Warranty

LSP Performance 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

LSP Performance 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.



SECTION 1 Product and Company Information

PRODUCT NAME: SeamTek 200 C ISO Chemtrec
GENERIC NAME: Aspartic Ester 24 Hour Emergency Number 1-800-424-9300
 Information Number 1- 920-803-1700

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

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
 Skin sensitizer, Skin, Eye, Respiratory Irritant, Digestive Tract Irritant

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

Health		Environmental	Physical
Eye Irritation	Category 2A	Not Classified	Not Classified
Respiratory Sensitization	Category 1		
Skin Sensitization	Category 1		

Pictogram:




Hazard Statements	Precautionary Statements
H317 May cause an allergic skin reaction H319 Causes serious eye irritation H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled	P261 Avoid breathing dust/fume/gas/mist/vapours/ spray. P264 Wash thoroughly after handling. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves/eye protection/face protection. P285 In case of inadequate ventilation wear respiratory protection. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P333 + P313 If skin irritation or rash occurs get medical advice/ attention. P337 + P311 If eye irritation persists: Get medical advice/ attention. P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician P363 Wash contaminated clothing before reuse. P501 Dispose of containers in accordance with local/regional/national/international requirements.

SECTION 3 Composition / Information on Ingredients

Chemical Name	CAS	Wt%
Hexane,1,6-diisocyanate, -Homopolymer	28182-81-2	100 %
Hexamethylene Diisocyanate (HDI)	822-06-0	< 0.5

SECTION 4 First Aid Measures

Eyes Contact: Immediately flush eyes gently with large amounts of water for at least 15 minutes. Retract eyelids often. Get prompt medical attention. Can cause pain, tearing, reddening, and swelling accompanied by a stinging sensation. Chronic exposure can cause corneal opacity.

Skin Contact: Thoroughly wash the exposed area with mild soap and water. Remove contaminated clothing and launder contaminated clothing before re-use. Seek medical attention if exposure symptoms develop.

May be harmful if absorbed through the skin. Symptoms of irritation may be reddening swelling, rash, scaling or blistering. May cause sensitization and allergic reaction.

Ingestion: If victim is conscious and alert, give 2 - 3 glasses of water to drink and induce vomiting by touching the back of the throat with a finger. Do not induce vomiting or give anything by mouth to an unconscious person. Seek immediate medical attention. Do not leave victim unattended. Vomiting may occur spontaneously. To prevent aspiration of swallowed product, lay victim on side with head lower than the waist if vomiting occurs and the victim is conscious; give water to further dilute the chemical.

May be harmful if swallowed. Can cause irritation and possible corrosive action to the mouth, stomach tissue and digestive tract.

Inhalation: If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention immediately. May cause shortness of breath, headache, nausea, vomiting, respiratory tract irritation.

Advise to physicians: All treatment should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Exposure may aggravate asthma and other respiratory disorders (bronchitis, emphysema, and hyperactivity) skin allergies and eczema.

SECTION 5 Fire Fighting Measures

Conditions of Flammability

Product will burn under fire conditions. Under fire conditions, toxic, corrosive fumes are emitted including nitrogen and carbon oxides. Use water to cool tightly closed containers exposed to fire. Self contained breathing apparatus and full protective clothing is required when smoke or fumes are generated.

Suitable extinguishing media

Dry Chemical, CO2, Foam, **WATER IS NOT** recommended.

Hazardous Decomposition Products

Thermal decomposition may produce nitrogen oxides and 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. Use water spray/fog for cooling tightly sealed containers. Notify authorities if liquid enters sewer/public waters.

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. Prevent runoff from entering drains, sewers, or streams. Dispose/report per regulatory requirements. See Section 1 for emergency contact information and Section 13 for waste disposal.

Methods and Materials for Containment and Cleaning Up

Cover spills and soak up small spill with inert solids (such as vermiculite, clay) and sweep/shovel into disposal container. Pump free liquid into an appropriate closed container. Clean up spill area with a decontamination solution made up of 50% isopropanol, 45% water and 5% concentration ammonia solution (% by Weight). The solution should cover the area for at least one hour. Absorb with an inert absorbent. Collect washing for disposal. Dispose/report per regulatory requirements. **Do not** flush into drains.

SECTION 7 Handling and Storage

Precautions for Safe Handling

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 the vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate.

Conditions for Safe Storage

This material is stable under normal handling and storage conditions. Maximum storage temperature is < 40 C (104 F). Store in a dry, well ventilated area. Store, transfer and handle under a blanket of nitrogen. Before closing partially empty containers, blanket with dry nitrogen. Replace damaged gaskets.

Store in tightly closed containers. Store in original container. Recommended container material: aluminum, epoxy coated steel, stainless steel, plastic. Container material to avoid, copper, tin.

SECTION 8 Exposure Controls / Personal Protection

EXPOSURE GUIDELINES

Hazardous Component	PEL	STEL	TLV	Other
Hexane,1,6-diisocyanate, -Homopolymer	NE	NE	NE	
Hexamethylene Diisocyanate (HDI)	NE	NE	ACGIH 0.005 ppm	

Engineering Controls

Local exhaust ventilation may be required in addition to general room ventilation. Good industrial hygiene practice dictates that worker protection be achieved through ventilation whenever feasible.

Respiratory Protections

Where respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations. Full-face air purifying respirators are required in work environments where isocyanate airborne concentrations exceed the action level but are significantly lower than the IDLH provided that the cartridges are changed daily. Use combination HEPA Filter for the polyisocyanate aerosol and an organic vapor cartridge for the solvents used. Full face supplied air respirators (SAR) are required in work environments where isocyanate airborne concentrations have not been characterized or are expected to exhibit considerable and sudden variations such as in spray type application. Curing ovens must be ventilated to prevent emissions to the workplace.

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, rubber or latex. Clean equipment thoroughly after each use.

Other hygienic practices

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

OTHER WORK PRACTICES

Precautions must be taken so that persons handling this product do not allow contact with eyes or skin. In spray operations protection must be afforded against exposure to both vapor and spray mists.

Use good personal hygiene practices. Do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is being used. Wash hands before eating, drinking, smoking or using toilet facilities. Wash exposed skin promptly to remove accidental splashes or contact with these materials. 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	Clear to Pale yellow
pH	Not available
Melting/Freezing Temperature	67 C (152 F)
Boiling Point	255 C (491 F)
Flash Point	170 C/ 338 F
Ignition Temperature	Not available
Autoignition Temperature	454 C (849 F)
Lower explosive limit; na	Upper explosive limit: na
Vapor Pressure	0.001 mm Hg at 20 C
Vapor Density (air=1)	5.8 Air = 1
Specific Gravity (water=1 @39.2F)	1.13 at 20 C/68F
Evaporation Rate (Bac=1)	Not available
Odor	Odorless
Odor threshold	Not available

SECTION 10 Stability and Reactivity

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

Stable under normal processing conditions.

Conditions to Avoid

Reacts violently with common materials including water, alcohols, bases and amines.

Materials to Avoid

Store away from water, alcohols, bases, and amines.

Hazardous Decomposition Products

Thermal decomposition may produce nitrogen oxides and carbon oxides

SECTION 11 Toxicological Information

Acute Toxicity hexamethylene diisocyanate

Oral LD50 – lethal concentration 50% of test species	Rat	> 5,000 mg/kg
Dermal LD50 – lethal concentration 50% of test species	Rabbit	> 2,000 mg/kg
Inhalation LD50 – lethal concentration 50% of test species	Rat	2.18 mg/l – 4 hr

Skin Corrosion/Irritation

Skin	Rabbit	Slightly Irritating
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Serious Eye Damage/Eye Irritation

Eye	Rabbit	Mildly Irritating
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Respiratory or Skin Sensitization

Skin	Guinea Pig	Sensitizing
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Mutagenicity
No data available

Carcinogenicity

IARC: During normal processing, no component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: During normal processing, no component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

NTP: During normal processing, no component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

SECTION 12 Ecological Information

Aquatic Ecotoxicity	Bioaccumulative potential	No data available
No data available		
Biodegradability		
No data available		
Mobility in soil		
No data available		

SECTION 13 Disposal Considerations

Waste Disposal

When a decision is made to discard this material as supplied, it does not meet RCRA's characteristics definition of ignitability, corrosiveness, or reactivity and is not listed in 40CFR261.33. The toxicity characteristic (TC), has not been evaluated by the Toxicity Characteristic Leaching Procedure (TCLP).

SECTION 14 Transport Information

DOT (US)
Not regulated by DOT

IMDG
Not regulated by IMDG

IATA
Not regulated by IATA

SECTION 15 Regulatory Information

TSCA INVENTORY STATUS
 All components are listed or exempt

OSHA HAZARDS
 Skin Irritant, Skin Sensitizer, Eye Irritant, Respiratory Irritant, Digestive Tract Irritant

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

SARA TITLE III: Section 311/312 Hazard Class

Hexamethylene diisocyanate		CERCLA/SARA RQ 100 lbs
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SARA TITLE III: Section 313 (40CFR370)

Hexamethylene diisocyanate		CERCLA/SARA RQ 100 lbs
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CERCLA Information (40CFR302.4)
 This material contains Hexamethylene diisocyanate and releases in excess of CERCLA thresholds are reportable.

California Proposition 65 Information:
 This product does not contain, or may contain substance(s) 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 SDS 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 SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable. This SDS has been prepared in accordance with the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

SECTION 1 Product and Company Information

PRODUCT NAME: SeamTek 200 Clear Coat Chemtrec
GENERIC NAME: Poly Resin 24 Hour Emergency Number 1-800-424-9300
 Information Number: 1- 920-803-1700

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

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
 Skin, Eye and Respiratory Irritant, Skin Sensitizer
 Target Organs: Eyes, Skin, Digestive Tract, Respiratory Tract

Carcinogenicity:
 Not listed by NTP Reproductive Toxicity
 Not Listed by IARC Reproductive Effects : Not Available
 Not Listed by OSHA Teratogenic Effects: No evidence of mutagenetic effects

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

Health		Environmental	Physical
Acute Toxicity	Category 5	Acute Aquatic Hazard	Category 3
Skin Irritant	Category 2		
Eye Irritation	Category 2A		
Skin Sensitizer	Category 1		
STOT (Respiratory)	Category 3		

Pictogram: 

Hazard Statements	Precautionary Statements
H315 May be harmful if swallowed	P261 Avoid breathing dust/fume/gas/mist/vapours/ spray.
H315 Causes skin irritation	P264 Wash thoroughly after handling.
H317 May cause an allergic skin reaction	P280 Wear protective gloves/eye protection/face protection.
H319 Causes serious eye irritation	P302+P352 IF ON SKIN: Wash with plenty of soap and water.
H335 May Cause respiratory irritation	P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
H402 Harmful to aquatic life	P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P312 Call a POISON CENTER or doctor/physician if you feel unwell.
	P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
	P363 Wash contaminated clothing before reuse.
	P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
	P501 Dispose of containers in accordance with local/regional/national/international requirements.

SKIN May cause irritation with symptoms of reddening and itching. Repeated exposure may cause allergic skin reaction with symptoms of reddening, itching swelling, and rash. May cause sensitization of susceptible persons.

INGESTION
 Ingestion is not a typical route of industrial exposure. May cause irritation. Symptoms include abdominal pain, nausea, vomiting and diarrhea.

INHALATION

Inhalation is unlikely due to low vapor pressure. If misted or handled at elevated temperatures, high concentrations may cause respiratory tract irritation. Wear appropriate respiration equipment if vapor or mist is expected. Symptoms of irritation may include coughing, mucous production and shortness of breath. This product contains talc which is currently listed by OSHA as a respirable dust hazard with an exposure limits of 2 mg/m³.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

This material or its emissions may induce an allergic or sensitization reaction and thereby aggravate systemic disease. Exposure to dusts may aggravate breathing problems, colds and congestion.

SECTION 3 Composition / Information on Ingredients

Chemical Name	CAS	Wt%
Aspartic Ester (s)	Proprietary	50 - 70 %
Aliphatic Carboxylic Ester	623-91-6	1 - 5%
Propylene Carbonate	50862-75-4	1 - 5%
Aldimine	54914-37-3	1 - 5%

SECTION 4 First Aid Measures

Eyes Contact: Immediately flush eyes gently with large amounts of water for at least 20-30 minutes. Retract eyelids often. Get prompt medical attention. Symptoms of exposure may include pain or burning sensation, redness, swelling, tearing/discharge or blurred vision.

Skin Contact: Thoroughly wash the exposed area with mild soap and water. Remove contaminated clothing and launder contaminated clothing before re-use. Seek medical attention if exposure symptoms develop.

Symptoms may include irritation with reddening and itching. Repeated exposure may cause allergic skin reaction and sensitization of susceptible persons.

Ingestion: If large quantity is swallowed, give lukewarm water (2 cups) if victim is completely conscious/alert. Do not induce vomiting as risk of damage to lungs exceeds poisoning risk. Obtain emergency medical attention.

Inhalation: Inhalation is unlikely due to low vapor pressure. If misted or handled at elevated temperatures, high concentrations may cause respiratory tract irritation. If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.

Advise to physicians: If exposed, treat skin and eye burns or irritation conventionally after decontamination. This material or its emissions may induce an allergic or sensitization reaction and thereby aggravate systemic disease.

SECTION 5 Fire Fighting Measures

Conditions of Flammability

At higher temperatures vapors can cause pressure build up in sealed containers. Use water to cool containers exposed to fire.

Suitable extinguishing media

Dry Chemical, CO₂, Foam, Water spray/water fog for cooling.

Hazardous Decomposition Products

Fire and thermal decomposition can produce carbon oxides, nitrogen oxides (NO_x) amines and other aliphatic fragments which have not been determined. Ammonia may be liberated at high temperatures.

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. Notify authorities if liquid enters sewer/public waters.

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

Extinguish all ignition sources and ventilate area. Wear protective equipment during clean up. Cover spills and soak up small spill with inert solids (such as vermiculite, clay) and sweep/shovel into vented disposal container. Wash spill area with a strong detergent and water solution; rinse with water but minimize water use during clean up. For spills on water, contain, minimize dispersion and collect. Dispose/report per regulatory requirements. Evacuate and keep unnecessary people out of the spill area. See Section 1 for emergency contact information and Section 13 for waste disposal.

SECTION 7 Handling and Storage

Precautions for Safe Handling

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.

Conditions for Safe Storage

Keep container closed when not in use. Store in a dry place away from excessive heat. The material can be stored safely at ambient temperatures. Minimum storage temperature 32 F (0 C) Maximum storage temperature 104 F (40 C). Material is hygroscopic and may absorb small amounts of atmospheric moisture.

SECTION 8 Exposure Controls / Personal Protection

EXPOSURE GUIDELINES

Hazardous Component	PEL	STEL	TLV	Other
Aspartic Ester (s)	NE	NE	NE	
Aliphatic Carboxylic Ester	NE	NE	NE	
Propylene Carbonate	NE	NE	NE	
Aldimine	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.

Respiratory Protections

No respiratory protection is recommended for working with this material. However if conditions such as in a spray application create a high vapor or mist concentration, use of a NIOSH/MSHA organic vapor/particulate approved respirator or supplied air is recommended.

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, rubber or latex. Clean equipment thoroughly after each use.

Other hygienic 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	Clear to light straw
pH	Not available
Melting/Freezing Temperature	< -20 C (<4 F)
Boiling Point	185C/365F @ 1.0133mbar)
Flash Point	> 93.3 C/200 F
Ignition Temperature	Not available
Autoignition Temperature	N/AP
Lower explosive limit; na	Upper explosive limit: na
Vapor Pressure	0.000014 mm Hg
Vapor Density (air=1)	>1
Specific Gravity (water=1 @39.2F)	AP 1.22 at 25 C/77F
Evaporation Rate (Bac=1)	None
Odor	Mild amine odor
Odor threshold	Not available

SECTION 10 Stability and Reactivity

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

Hazardous polymerization does not occur.

Conditions to Avoid

Avoid extreme heat.

Materials to Avoid

Avoid contact with oxidizing agents.

Hazardous Decomposition Products

Fire and thermal decomposition can produce carbon oxides, nitrogen oxides (NOx) amines and other aliphatic fragments which have not been determined. Ammonia may be liberated at high temperatures.

SECTION 11 Toxicological Information

<p>Toxicity Data Based on DESMOPHEN NH 1520</p> <p>Acute Toxicity</p> <p>Oral LD50 Rat > 200 mg/kg</p> <p>Dermal LD50 Rat > 2,000 mg/kg</p> <p>Inhalation LC50 Rat > 4,224 mg/m³</p> <p>Skin Corrosion/Irritation</p> <p>Skin Rabbit Moderate skin Irritant</p> <p>Serious Eye Damage/Eye Irritation</p> <p>Eye Rabbit Non-irritating</p> <p>Respiratory or Skin Sensitization</p> <p>Dermal Guinea Pig Sensitizer</p> <p>Mutagenicity</p> <p>Genetic Toxicity in Vitro: Ames test: negative (Salmonella typhimurium)</p> <p>Toxicity Data Based on Aliphatic Carboxylic Ester</p> <p>Acute Toxicity</p> <p>Oral LD50 Rat 1,780 mg/kg</p>	<p>Toxicity Data Based on Aspartic Ester</p> <p>Acute Toxicity</p> <p>Oral LD50 Rat > 2,000 mg/kg</p> <p>Dermal LD50 Rat > 2,000 mg/kg</p> <p>Inhalation LC50 Rat 4,224 mg/m³</p> <p>Skin Corrosion/Irritation</p> <p>Skin Rabbit Moderate skin Irritant</p> <p>Serious Eye Damage/Eye Irritation</p> <p>Eye Rabbit Non-irritating</p> <p>Respiratory or Skin Sensitization</p> <p>Dermal Guinea Pig Sensitizer</p> <p>Mutagenicity</p> <p>Genetic Toxicity in Vitro: Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)</p> <p>Carcinogenicity</p> <p>IARC: During normal processing, no component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.</p> <p>ACGIH: During normal processing, no component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.</p> <p>NTP: During normal processing, no component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.</p>
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SECTION 12 Ecological Information

Aquatic Ecotoxicity Desmophen NH1520

Toxicity to fish	LC50 Brachydanio rerio (Zebra fish) 66 mg/l – 96 h
Toxicity to aquatic invertebrates	EC50 Daphnia magna (water flea) 88.6 mg/l – 48 h
Toxicity to algae	EC50 Scenedemus subspicatus (Green Algae) 113 mg/l – 72 h
Toxicity to bacteria	EC50 3,000 mg/l

Biodegradability

13% Not readily biodegradable. Aerobic exposure time 28 d

Bioaccumulative potential

No data available

Mobility in soil

No data available

SECTION 13 Disposal Considerations

Waste Disposal

When a decision is made to discard this material as supplied, it does not meet RCRA's characteristics definition of ignitability, corrosiveness, or reactivity and is not listed in 40CFR261.33. The toxicity characteristic (TC), has not been evaluated by the Toxicity Characteristic Leaching Procedure (TCLP).

SECTION 14 Transport Information

DOT (US)

Not regulated by DOT

IMDG

Not regulated by IMDG

IATA

Not regulated by IATA

SECTION 15 Regulatory Information

TSCA INVENTORY STATUS

All components are listed or exempt

OSHA HAZARDS

Skin, Eye and Respiratory Irritant, Skin Sensitizer

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

SARA TITLE III: Section 311/312 Hazard Class

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

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 does not contain, or may contain substance(s) 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 SDS 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 SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable. This SDS has been prepared in accordance with the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of this data or results to be obtained from the user thereof. LSP Performance Resins assumes no responsibility for personal injury or property damage to vendees, such vendees or users assume all risks associated with the use of the material.

MATERIAL SAFETY DATA SHEET

Flakes/Chips

1. PRODUCT and COMPANY INFORMATION

Product Name: Chips/Flakes
Manufacturer: CHIPS UNLIMITED, INC.
Address: 1824 East 6th Street
Tempe, Arizona 85281 U.S.A.
Telephone: 877-502-4477 • 480-968-1550
Internet: www.chipsunlimited.com

MADE IN THE U.S.A.

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS Number</u>	<u>Concentrate</u>
Polyvinyl Acetate	CAS#9003-20-7	12 - 22%
Barium Sulfate (Material is stable – Hazardous polymerization will not occur.)	CAS#7727-43-7	65 - 85%
Talc	CAS#14807-96-6	2 - 10%
Potassium TriPolyPhosphate	CAS#13845-36-8	<.15%
Titanium Dioxide (Not used in black, dark blue, dark green or dark brown colors.)	CAS#13463-67-7	1 - 10%
Carbon Black (Black Chips Only)		± .5%

Additionally, Carbon Black CAS#1333-86-4 and various Copper Compounds are used to achieve other final color. When used, only a trace (± .1%) remains.

3. HAZARDS IDENTIFICATION (Hazard Material Identification System)

Effects of Overexposure

Health – 0; Flammability – 1 (Minimal); Reactivity – 0; Personal Protection – E (Dust Resp).

Inhalation: The dust may cause respiratory irritation with coughing and shortness of breath. The chips/dust are not likely to be hazardous to the skin.

Eye Contact: The dust may be irritating to the eye.

4. FIRST AID MEASURES

Emergency and First Aid Procedures

Inhalation: Remove affected party/parties to an area with plenty of fresh air. If effects persist call a physician.

Eye and Skin Contact: Flush affected area with plenty of water for about 10 to 15 minutes. Wash affected skin area with soap and water.

5. FIRE FIGHTING MEASURES

Fire and explosive properties: This product is not known to present any fire hazard.

6. ACCIDENTAL RELEASE MEASURES

Sweep up and/or shovel or use vacuum to clean up spillage. Deposit into covered container for disposal. All material should then be disposed of in accordance with pertinent Federal, State and Local regulations.

7. HANDLING AND STORAGE

Handling: Avoid dust formation. Provide appropriate exhaust ventilation in places where dust is formed. In case of insufficient ventilation, wear suitable respiratory equipment.

Storage: Store in a dry area. Keep containers closed and protect from physical damage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Use mechanical ventilation (dilution and local exhaust) to control exposure.

Eye Protection: Safety glasses with side shields.

Skin and Body Protection: Use suitable protective clothing, gloves and footwear, selected with regard for use conditions and exposure potential.

Hand Protection: Impervious gloves.

Respiratory Protection: In case of exposure to high levels of airborne dust, wear a respirator in compliance with national legislation.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice.

Environmental Exposure: This product does not present any particular risk for the environment. Refer to applicable national, state and local regulations prior to washing in drain.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: N/A

Vapor Pressure: Not Volatile

Vapor Density: Not Volatile

Specific Gravity (H₂O = 1): 1.1 – 1.2

Evaporation Rate (Butyl Acetate=1): Not Volatile

Appearance: Various colored flakes with color depending upon specific tints used in formula.

10. STABILITY AND REACTIVITY

Conditions contributing to instability: Product is stable but will react violently with sulfuric acid or alkali materials such as sodium.

Incompatibility: Not available/None known.

Conditions contributing to hazardous polymerization: None.

11. TOXICOLOGICAL INFORMATION

Chronic Toxicity: This product is not listed as a carcinogen by the IARC, NTP or OSHA.

No specific testing for irritation has been done.

12. ECOLOGICAL INFORMATION

No ecological testing has been done on this product.

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with local State and National regulations.

14. TRANSPORTATION INFORMATION

Not Regulated – Ship as Class 60.

15. REGULATORY INFORMATION

U.S. Toxic Substances Control Act: Compliant with regulations.

Sara Title III Section 312; Section 313: Not hazardous.

California Proposition 65: No ingredients known to be present that causes cancer, birth defects or reproductive hazards.

Canadian Domestic Substances List: All components in this product are on the Canadian Domestic Substances List or are exempt from listing.

16. OTHER INFORMATION

User's responsibility/disclaimer of liability: *As the conditions or methods of use are beyond our control, Chips Unlimited, Inc. does 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 are 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.*

Date Prepared: July 1990

Date Revised: March 2001, November 2001, September 2002, June 2005, November 2005

Date Reviewed: March 2009

SECTION 1 Product and Company Information

PRODUCT NAME: SeamTek® Topcoat Resin TRP354 (all colors) Chemtrec
GENERIC NAME: Pigmented Epoxy Resin 24 Hour Emergency Number 1-800-424-9300
Information Number: 1-800-666-6216

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



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 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
H315	Causes skin irritation	
H317	May cause an allergic skin reaction	
H318	Causes serious eye damage	

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 not 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

<p>Acute Toxicity Oral LD50 Rat > 4000 mg/kg. Dermal LD50 Rabbit 20,000 mg/kg Inhalation LC50 No data available</p> <p>Skin Corrosion/Irritation Skin Irritant</p> <p>Serious Eye Damage/Eye Irritation Eye Irritant Eyes Rabbit Severe eye irritation – 24 H</p> <p>Respiratory or Skin Sensitization May cause skin or respiratory sensitization</p> <p>Mutagenicity Mouse Skin Carcinogenic by RTECS Criteria liver, ovarian, thyroid</p>	<p>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</p> <p>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</p> <p>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</p>
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SECTION 12 Ecological Information

Aquatic Ecotoxicity
 No data available

Biodegradability
 Persistent 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

Health Hazard;	1	NFPA Rating	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).

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of this data or results to be obtained from the user thereof. LSP Performance Resins assumes no responsibility for personal injury or property damage to vendees, such as vendees or users assume all risks associated with the use of the material.


LSP PERFORMANCE RESINS
800.638.9874

124 Speer Road
FAX 410.778.3625

Chestertown, MD 21620
web www.lspinc.com

UTEK A UTEK PART A	
SAFETY DATA SHEET Effective Date 01/01/2015	HMIS Ratings Health – 1 Flammability – 1 Reactivity – 0

SECTION 1 Product and Company Information	
PRODUCT NAME: UTEK PART A GENERIC NAME: Heavy Duty, Cementitious Urethane Part A	Chemtrec 24 Hour Emergency Number 1-800-424-9300 Information Number: 1-800-666-6216
DISTRIBUTOR: LSP Performance Resins 124 Speer Road Chestertown, MD 21620	
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 Not considered hazardous		Potential Health Effects Inhalation: May cause irritation to the respiratory tract. Eyes: May cause eye irritation. Ingestion: May be harmful if swallowed. Skin: May cause irritation and sensitization of the skin
Carcinogenicity: Not listed by NTP Not Listed by IARC Not Listed by OSHA	Reproductive Toxicity Reproductive Effects : Not Available Teratogenic Effects: No evidence of mutagenetic effects	Signs and Symptoms of Overexposure: There are no known health effects associated with chronic exposure to this product.
GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS		
Health	Environmental	Physical
Eye Irritant Skin Irritant Respiratory Irritant	Not Classified	Not Classified
Pictogram: 		
Hazard Statements		Precautionary Statements

SECTION 3 Composition / Information on Ingredients		
Chemical Name	CAS	Wt%

SECTION 4 First Aid Measures
ADVISE TO PHYSICIANS
First Aid - Eye Contact: If material gets into eyes, flush with water immediately for 15 minutes. Consult a physician.
First Aid - Skin Contact: In case of contact, wash skin immediately with soap and water.
First Aid - Inhalation: If inhaled, remove to fresh air. Administer oxygen if necessary. Consult a physician if symptoms persist or exposure was severe.
First Aid - Ingestion: If swallowed do not induce vomiting. Seek immediate medical attention.

UTEK A UTEK PART A

SAFETY DATA SHEET
Effective Date 01/01/2015

HMIS Ratings
Health – 1
Flammability – 1
Reactivity – 0

SECTION 5 Fire Fighting Measures

Flash Point, F: 288F (142C)
(Setaflash) **Lower Explosive Limit, %:** N/A
Upper Explosive Limit, %: N/A

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: None known.

Special Firefighting Procedures: Evacuate hazard area of unprotected personnel. Use a NIOSH approved self-contained breathing unit and complete body protection. Cool surrounding containers with water in case of fire exposure.

SECTION 6 Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Use personal protective equipment as necessary. Absorb with suitable chemical absorbent. Dispose of material in accordance with all federal, state and local regulations.

SECTION 7 Handling and Storage

Handling: Do not get in eyes, on skin, or on clothing. Keep container tightly closed when not in use. Wear personal protection equipment. Do not breathe vapors. Wash thoroughly after handling. Use only in accordance with Verdia application instructions, container label and Product Data Sheet.

Storage: Keep containers closed. Store in a cool, dry place with adequate ventilation.

SECTION 8 Exposure Controls / Personal Protection

EXPOSURE GUIDELINES

Hazardous Component	PEL	STEL	TLV	Other

Engineering Controls: Use explosion-proof ventilation when required to keep below health exposure guidelines and Lower Explosion Limit (LEL).

Respiratory Protection: Use only with ventilation to keep levels below exposure guidelines listed in Section 2. User should test and monitor exposure levels to ensure all personnel are below guidelines. Follow all current OSHA requirements for respirator use.

Skin Protection: Recommend impervious gloves and clothing to avoid skin contact. If material penetrates to skin, change gloves and clothing. The use of protective creams may be beneficial to certain individuals. Protective creams should be applied before exposure.

Eye Protection: Recommend safety glasses with side shields or chemical goggles to avoid eye contact.

Other protective equipment: Eye wash and safety showers should be readily available.

Hygienic Practices: Wash with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Use of a hand cleaner is recommended. Launder contaminated clothing before reuse. Leather shoes can absorb and allow hazardous materials to pass through. Check shoes carefully after soaking before reuse.

SECTION 9 Physical and Chemical Properties

Form	liquid
Color	white
pH	N/DA
Melting/Freezing Temperature	N/A
Boiling Point	N/A

UTEK A UTEK PART A

SAFETY DATA SHEET
Effective Date 01/01/2015

HMIS Ratings
Health – 1
Flammability – 1
Reactivity – 0

Ignition Temperature	Not available
Flash Point	.60 °F (192.00 °C) estimated
Lower explosive limit; na	Upper explosive limit: na
Vapor Pressure	N/P
Vapor Density (air=1)	N/P
Specific Gravity (water=1 @39.2F)	
Evaporation Rate (Bac=1)	N/P
Odor	Not available
Odor threshold	Not available
Percent Volatiles	N/P
Relative Density	1.0
Solubility	Water soluble

SECTION 10 Stability and Reactivity

THIS PRODUCT IS STABLE
CONDITIONS AND MATERIALS TO AVOID - Frost
Incomparable material – none known
HAZARDOUS DECOMPOSITION PRODUCTS
Will not occur

SECTION 11 Toxicological Information

Local effects	None known
Chronic effects	None Known
Carcinogenicity	This product is NOT considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA

SECTION 12 Ecological Information

Persistence and degradability Prevent product from entering drains

SECTION 13 Disposal Considerations

Dispose of in accordance with State, Local, and Federal Environmental regulations. Responsibility for proper waste disposal is with the owner of the waste.

SECTION 14 Transport Information

DOT Proper Shipping Name:	Not Regulated	Packaging Group:	N/A
DOT Hazard Class:	None	Hazard Subclass:	N/A
DOT UN/NA Number:	None	Resp. Guide Page:	N/A
General DOT IATA:	Not Regulated as Dangerous Goods		

SECTION 15 Regulatory Information

CERCLA - SARA HAZARD CATEGORY

This product has been reviewed according to the EPA Hazard Categories promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD

UTEK A UTEK PART A

SAFETY DATA SHEET
Effective Date 01/01/2015

HMIS Ratings
Health – 1
Flammability – 1
Reactivity – 0

SARA SECTION 313

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

No Section 313 Substances exist in this product

TOXIC SUBSTANCES CONTROL ACT

All components of this product are listed on the TSCA inventory.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(B) Substances exist in this product

U.S. STATE REGULATIONS AS FOLLOWS: NEW JERSEY RIGHT-TO-KNOW

The following materials are non-hazardous, but are among the top five components in this product.

<u>Chemical Name</u>	<u>CAS Number</u>
CASTOR OIL	8001-79-4
PINE OIL	8002-09-3
PROPRIETARY SURFACTANT	TRADE SECRET
TRADE SECRET	TRADE SECRET
POLYOL	TRADE SECRET

PENNSYLVANIARIGHT-TO-KNOW

The following non-hazardous ingredients are present in the product at greater than 3%.

<u>Chemical Name</u>	<u>CAS Number</u>
CASTOR OIL	8001-79-4
PINE OIL	8002-09-3
PROPRIETARY SURFACTANT	TRADE SECRET

CALIFORNIA PROPOSITION 65

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

No California Proposition 65 Carcinogens exist

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards:

No California Proposition 65 Reproductive Toxins exist **INTERNATIONAL REGULATIONS AS**

FOLLOWS: CANADIAN WHMIS

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: D2B

UTEK A UTEK PART A	
SAFETY DATA SHEET Effective Date 01/01/2015	HMIS Ratings Health – 1 Flammability – 1 Reactivity – 0

SECTION 16 Other Information			
HMIS Ratings			
Health: 1	Flammability: 1	Reactivity: 0	Personal Protection: X
VOLATILE ORGANIC COMPOUNDS, GR/LTR MIXED (UNTHINNED): 0			
REASON FOR REVISION: Changes made in Section(s): 2, 9, 11, and 15			
Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined			
<p>The information contained herein is, to the best of our knowledge and belief accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations</p>			

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of this data or results to be obtained from the user thereof. LSP Performance Resins assumes no responsibility for personal injury or property damage to vendees, such vendees or users assume all risks associated with the use of the material.

SECTION 3 Composition / Information on Ingredients		
Chemical Name	CAS	Wt%
diphenylmethane-diisocyanate isomers and homologues	9016-87-9	> 95

SECTION 4 First Aid Measures

First Aid - Eye Contact: If material gets into eyes, flush with water immediately for 15 minutes. Consult a physician.

First Aid - Skin Contact: In case of contact, wash skin immediately with soap and water.

First Aid - Inhalation: If inhaled, remove to fresh air. Administer oxygen if necessary. Consult a physician if symptoms persist or exposure was severe.

First Aid - Ingestion: If swallowed do not induce vomiting. Seek immediate medical attention.

SECTION 5 Fire Fighting Measures

Flash Point, F: 425F (218C)
(Cleveland O.C.)

Lower Explosive Limit, %: N/A
Upper Explosive Limit, %: N/A

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam

Unusual Fire and Explosion Hazards: Water contamination will produce Carbon Dioxide. Do not reseal contaminated containers as pressure buildup may rupture them.

Special Firefighting Procedures: Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by firefighters. During a fire, MDI vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. (See stability and reactivity). At temperatures greater than 400F (204C), polymeric MDI can polymerize and decompose which can cause pressure build-up in closed containers. Explosive rupture is possible. Therefore, use cold water to cool fire- exposed containers. Evacuate hazard area of unprotected personnel. Use a NIOSH approved self-contained breathing unit and complete body protection. Cool surrounding containers with water in case of fire exposure. Since this product is water reactive, use DRY chemical powder for small fire. Use water spray, fog or foam for large fire. Do NOT use water jet.

SECTION 6 Accidental Release Measures

Steps to Be Taken If Material Is Released or Spilled: Use personal protective equipment as necessary. Absorb with suitable chemical absorbent. Dispose of material in accordance with all federal, state and local regulations. Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment, including respiratory equipment during cleanup.

Major Spill: If temporary control of isocyanate is required, a blanket of protein foam (available at most fire departments) may be placed over the spill. Large quantities may be pumped into closed, but not sealed, container for disposal. **Minor Spill:** Absorb isocyanates with sawdust or other absorbent, shovel into suitable unsealed containers, transport to well-ventilated area (outside) and treat with neutralizing solution: mixture of water (80%) with non-ionic surfactant Tergitol TMN-10 (20%), or water (90%), concentrated ammonia (3 - 8%) and detergent (2%). Add about 10 parts neutralizer per part of isocyanate, with mixing. Allow to stand uncovered for 48 hours to let CO2 escape. Clean up: decontaminate floor with decontamination solution letting stand for at least 15 minutes.

Dispose of in accordance with local, state and federal regulations. Refer to Section 15 for SARA Title III and CERCLA information.

SECTION 7 Handling and Storage

Do not get in eyes, on skin, or on clothing. Keep container tightly closed when not in use. Wear personal protection equipment. Do not breathe vapors. Wash thoroughly after handling. Use only in accordance with manufacturer application instructions, container label and Product Data Sheet.

STORAGE: Keep away from heat, sparks, open flames and oxidizing agents. Keep containers closed. Store in a cool, dry place with adequate ventilation.

SECTION 8 Exposure Controls / Personal Protection

EXPOSURE GUIDELINES

Hazardous Component	PEL	STEL	TLV	Other
diphenylmethane-diisocyanate isomers	.20 mg/m ³ ceiling limit		.05 mg/m ³ 8hr/40 hrs/wk	.05 mg/m³ 10 hr/40 hrs/wk
				NIOSH REL/TWA

ENGINEERING CONTROLS: USE EXPLOSION-PROOF VENTILATION WHEN REQUIRED TO KEEP BELOW HEALTH EXPOSURE GUIDELINES AND LOWER EXPLOSION LIMIT (LEL).

RESPIRATORY PROTECTION: USE ONLY WITH VENTILATION TO KEEP LEVELS BELOW EXPOSURE GUIDELINES LISTED IN SECTION 2. USER SHOULD TEST AND MONITOR EXPOSURE LEVELS TO ENSURE ALL PERSONNEL ARE BELOW GUIDELINES. IF NOT SURE, OR NOT ABLE TO MONITOR, USE MSHA/NIOSH APPROVED SUPPLIED AIR RESPIRATOR. FOLLOW ALL CURRENT OSHA REQUIREMENTS FOR RESPIRATOR USE. FOR SILICA CONTAINING COATINGS IN A LIQUID STATE, AND/OR IF NO EXPOSURE LIMITS ARE ESTABLISHED IN SECTION 2 ABOVE, SUPPLIED AIR RESPIRATORS ARE GENERALLY NOT REQUIRED.

SKIN PROTECTION: RECOMMEND IMPERVIOUS GLOVES AND CLOTHING TO AVOID SKIN CONTACT. IF MATERIAL PENETRATES TO SKIN, CHANGE GLOVES AND CLOTHING. THE USE OF PROTECTIVE CREAMS MAY BE BENEFICIAL TO CERTAIN INDIVIDUALS.

PROTECTIVE CREAMS SHOULD BE APPLIED BEFORE EXPOSURE.

EYE PROTECTION: RECOMMEND SAFETY GLASSES WITH SIDE SHIELDS OR CHEMICAL GOGGLES TO AVOID EYE CONTACT.

OTHER PROTECTIVE EQUIPMENT: EYE WASH AND SAFETY SHOWERS SHOULD BE READILY AVAILABLE.

HYGIENIC PRACTICES: WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING, APPLYING COSMETICS, OR USING TOILET FACILITIES. USE OF A HAND CLEANER IS RECOMMENDED. LAUNDRER CONTAMINATED CLOTHING BEFORE REUSE. LEATHER SHOES CAN ABSORB AND ALLOW HAZARDOUS MATERIALS TO PASS THROUGH. CHECK SHOES CAREFULLY AFTER SOAKING BEFORE REUSE.

SECTION 9 Physical and Chemical Properties

Appearance	
Form	liquid
Color	brown
pH	N/DA
Melting/Freezing Temperature	N/A
Boiling Point	>550 deg – C decomposes
Ignition Temperature	Higher than 1110 deg C (350deg F) Flash Point
Autoignition Temperature	>600 deg C
Lower explosive limit; na	Upper explosive limit: na
Vapor Pressure	<0.0001 mbar at 70 °F (100Pa = 1 mbar)
Vapor Density (air=1)	.8 (Air =1)
Specific Gravity (water=1 @39.2F)	N/A
Evaporation Rate (Bac=1)	N/P
Odor	Slight musty
Odor threshold	Not available
Percent Volatiles	N/P
Viscosity	45 - 95 mPa's at 80 °F
Water Solubility	Insoluble, reacts to produce carbon dioxide and polyurea solid
Relative Density	1.24 at 70 °F

SECTION 10 Stability and Reactivity

CONDITIONS TO AVOID: CONTAMINATION WITH WATER. HEAT AND OPEN FLAMES.

INCOMPATIBILITY: WATER, AMINES, STRONG BASES, ALCOHOLS. WILL CAUSE CORROSION TO COPPER ALLOYS

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE, NITROGEN OXIDES, AND UNIDENTIFIED ORGANIC COMPOUNDS. CONSIDER ALL SMOKE AND FUMES FROM BURNING MATERIAL AS VERY HAZARDOUS. WELDING, CUTTING OR ABRASIVE GRINDING CAN CREATE SMOKE AND FUMES. DO NOT BREATHE ANY FUMES OR SMOKE FROM THESE OPERATIONS.

HAZARDOUS POLYMERIZATION: MAY OCCUR; CONTACT WITH MOISTURE, OTHER MATERIALS WHICH REACT WITH ISOCYANATES, OR TEMPERATURES ABOVE 400F (204 C), MAY CAUSE POLYMERIZATION.

STABILITY: THIS PRODUCT IS STABLE UNDER NORMAL STORAGE CONDITIONS.

SECTION 11 Toxicological Information

Acute oral toxicity

: LD₅₀ Oral (rat) : >5,000 mg/kg

Inhalation

: LC₅₀ inhalation (rat) ca. 490 mg as aerosol/m³, 4 hrs exposure.
Concentration of saturated vapour: 0.09 mg/m³ at 80 °F

Irritation

: Over exposure, especially when spraying without the necessary precautions, entails the risk of concentration dependant irritating effects on eyes, nose, throat and respiratory tract.
In mild cases the affected person may experience slight irritation of the eyes, nose and throat, possibly combined with dryness of the throat. In more severe cases the person may suffer acute bronchial irritation and difficulty in breathing.

Skin

: Prolonged contact with the skin may cause tanning and irritant effects.
LD₅₀ Dermal (rabbit) > 5,000 mg/kg

Sensitisation

: Repeated and /or prolonged exposure, especially at levels above the MEL, may cause an allergic reaction/respiratory sensitisation. Once sensitised, an individual may produce an allergic reaction every time they are in contact with isocyanates. Individuals who have developed sensitivity may experience wheezing, tightness of the chest and shortness of breath. A hyper-reactive response to even minimal concentrations of isocyanate may develop in sensitised persons.

The onset of respiratory symptoms (difficulty in breathing, coughing, asthma) may be delayed for several hours after exposure.

Repeated and/or prolonged skin contact may cause skin sensitisation. Animal studies have shown respiratory sensitisation can be induced by skin contact with known respiratory sensitisers, including isocyanates.

Animal studies have shown that respiratory sensitisation can be induced by skin contact with known respiratory sensitisers including diisocyanates.

Long term toxicity

: Animal testing has shown no long term adverse effects at or below the MEL.
Chronic pulmonary irritation observed at high concentrations. There are reports that chronic exposure by inhalation may result in decreases in lung function.

Carcinogenicity

: The classification for diphenylmethane diisocyanate has changed to carcinogenic, category 3, when it is in the form of respirable aerosol e.g. when sprayed.

Mutagenicity

: There is no substantial evidence of mutagenic potential.

Reproductive toxicity

: No birth defects seen in animal (rat) studies.
Fetotoxicity was observed at doses that were extremely toxic (including lethal) to the mother.
Fetotoxicity was not observed at doses that were not maternally toxic.

SECTION 12 Ecological Information

Ecological Information: Ecological data based on Polymeric MDI Biodegradation: 0%, Exposure time: 28 Days

Bioaccumulation:
 Rainbow Trout, Exposure time: 112d, <1 BCF Does not Bioaccumulate.

Acute and Prolonged Toxicity to Fish:
 LC0: >1,000 mg/l (Zebra fish (Brachydanio rerio), 96 hrs.) LC0: > 3,000 mg/l (Killifish (Oryzias latipes), 96h)

Acute toxicity to Aquatic Invertebrates:
 EC50: > 1,000 mg/l (Water flea (Daphnia magna), 24 hrs.)

Toxicity to aquatic plants:
 NOEC: 1640 mg/l, End Point: growth (Green algae (Scenedesmus subspicatus), 72 hrs.)

Toxicity to Microorganisms:
 EC50: > 100 mg/l, (Activated sludge microorganisms, 3 hrs.)

Ecological Data for 4,4'- Diphenylmethane Diisocyanate (MDI) Acute and Prolonged Toxicity to Fish:
 LC50: > 500 mg/l (Zebra fish (Brachydanio rerio), 24 hrs.)

Acute Toxicity to Aquatic Invertebrates:
 EC50: > 500 mg/l (Water flea (Daphnia magna), 24 hrs.)

SECTION 13 Disposal Considerations

Waste Disposal
 Dispose of in accordance with State, Local, and Federal Environmental regulations. Responsibility for proper waste disposal is with the owner of the waste.

SECTION 14 Transport Information

DOT Proper Shipping Name: Not Regulated	Packaging Group: N/A
DOT Hazard Class: None	Hazard Subclass: N/A
DOT UN/NA Number: None	Resp. Guide Page: N/A

SECTION 15 Regulatory Information

CERCLA - SARA HAZARD CATEGORY

THIS PRODUCT HAS BEEN REVIEWED ACCORDING TO THE EPA HAZARD CATEGORIES PROMULGATED UNDER SECTIONS 311 AND 312 OF THE SUPERFUND AMENDMENT AND REAUTHORIZATION ACT OF 1986 (SARA TITLE III) AND IS CONSIDERED, UNDER APPLICABLE DEFINITIONS, TO MEET THE FOLLOWING CATEGORIES:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, REACTION HAZARD

CANADIAN WHMIS CLASS: D1A, D2A, D2B

SARA SECTION 313

THIS PRODUCT CONTAINS THE FOLLOWING SUBSTANCES SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENT AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372:

<u>CHEMICAL NAME</u>	<u>CAS NUMBER</u>
POLYMERIC MDI	9016-87-9
4,4' MDI	101-68-8

TOXIC SUBSTANCES CONTROL ACT

ALL COMPONENTS OF THIS PRODUCT ARE LISTED ON THE TSCA INVENTORY.

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL SUBSTANCES SUBJECT TO THE REPORTING REQUIREMENTS OF TSCA 12(B) IF EXPORTED FROM THE UNITED STATES:

No TSCA 12(B) SUBSTANCES EXIST IN THIS PRODUCT

U.S. STATE REGULATIONS AS FOLLOWS: NEW JERSEY RIGHT-TO- KNOW

THE FOLLOWING MATERIALS ARE NON-HAZARDOUS, BUT ARE AMONG THE TOP FIVE COMPONENTS IN THIS PRODUCT.

PENNSYLVANIA RIGHT-TO-KNOW

THE FOLLOWING NON-HAZARDOUS INGREDIENTS ARE PRESENT IN THE PRODUCT AT GREATER THAN 3%.

CALIFORNIA PROPOSITION 65

WARNING: THE FOLLOWING INGREDIENTS PRESENT IN THE PRODUCT ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER:

No CALIFORNIA PROPOSITION 65 CARCINOGENS EXIST

WARNING: THE FOLLOWING INGREDIENTS PRESENT IN THE PRODUCT ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS, OR OTHER REPRODUCTIVE HAZARDS:

No CALIFORNIA PROPOSITION 65 REPRODUCTIVE TOXINS EXIST
INTERNATIONAL REGULATIONS AS FOLLOWS: CANADIAN WHMIS
 THIS MSDS HAS BEEN PREPARED IN COMPLIANCE WITH CONTROLLED PRODUCT REGULATIONS EXCEPT FOR THE USE OF THE 16 HEADINGS.

SECTION 16 Other Information

HMIS Ratings

Health: 3 Flammability: 1 Reactivity: 1 Personal Protection: X

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information contained herein is, to the best of our knowledge and belief accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulation.

SECTION 3 Composition / Information on Ingredients

Chemical Name	EINECS No.	CAS No.	% by weight	Symbols and Risk Phrases
Cements	270-659-9	68475-76-3	5 - 15	Xi; R41.
Hydrated Lime	215-137-3	1305-62-0	< 10	Xi; R38. R41.
Silica Sand, Silicon dioxide	238-878-4	14808-60-7	> 30	None.
Respirable crystalline silica	-	14808-60-7	Trace	Xn; R48:R20.

SECTION 4 First Aid Measures

General Information: In case of accident or you feel unwell, seek medical advice and take the relevant safety data sheets.

Never give anything by mouth to an unconscious person.

Inhalation : If irritation occurs, move to fresh air. If nose or airways become inflamed seek medical advice.

Skin contact : Wash with soap and plenty of water before continuing. If irritation, pain or other skin trouble occurs, seek medical advice. Contaminated clothing should be removed and washed thoroughly before re-use.

Eye Contact : Hold eyelids apart and immediately flush with plenty of water for at least 15 minutes. Seek medical advice immediately.

INGESTION : **WASH OUT MOUTH WITH WATER AND GIVE PATIENT PLENTY OF WATER TO DRINK**

PHYSICIAN: SYMPTOMATIC AND SUPPORTIVE THERAPY AS NEEDED. FOLLOWING SEVERE EXPOSURE MEDICAL FOLLOW-UP SHOULD BE MONITORED FOR AT LEAST 48

SECTION 5 Fire Fighting Measures

THIS MATERIAL IS NON-COMBUSTIBLE AND WILL NOT FACILITATE COMBUSTION WITH OTHER MATERIALS.

SECTION 6 Accidental Release Measures

- **Personal precautions :** Use personal protective equipment as detailed in Section 8.
- **Ensure adequate ventilation.**
- **Environmental precautions :** Avoid the formation of dust clouds.
- **Methods for cleaning up :** Sweep or preferably vacuum up and collect in suitable containers for disposal in accordance with Section 13. Avoid creating a dust cloud, dampen with water if possible. Addition of water may result in the product hardening in situ if not removed quickly.

SECTION 7 Handling and Storage

Handling : Provide sufficient air exchange and/or exhaust in work rooms. Avoid formation of dust cloud. Ensure adequate ventilation. Use personal protective equipment as detailed in Section 8. Handle and open container with care.

Storage : Store in a dry, cool, well-ventilated place.

SECTION 8 Exposure Controls / Personal Protection

EXPOSURE GUIDELINES

Hazardous Component	PEL	STEL	TLV	Other
Silica, respirable crystalline dust	0.1 mg/m ³ 8hr TWA (8 hour time weighted average) (CHAN)			
Respirable dust				4 mg/m ³ 8hr TWA
Occupational Exposure Standard for dust,				10mg/m ³ 8hr TWA

ENGINEERING MEASURES TO REDUCE EXPOSURE : LOCAL EXHAUST VENTILATION IS RECOMMENDED WHERE DUST IS LIKELY TO BE GENERATED FROM THE HANDLING OF DRY MATERIAL.

PERSONAL PROTECTIVE EQUIPMENT :

RESPIRATORY PROTECTION : DUST RESPIRATOR IF THE CONDITIONS ARE DUSTY.

EYE PROTECTION : GOGGLES OR FACE SHIELD.

HAND PROTECTION : IMPERVIOUS GLOVES

SKIN AND BODY PROTECTION : PROTECTIVE SUIT.

PROTECTIVE MEASURES : USE OF THE BASIC PRINCIPLES OF INDUSTRIAL HYGIENE WILL ENABLE THIS MATERIAL TO BE USED SAFELY.

RESPIRATORY WHEN THE PRODUCT IS SPRAYED OR HEATED WITHOUT ADEQUATE VENTILATION, AN APPROVED **MSHA/NIOSH** POSITIVE-PRESSURE, SUPPLIED-AIR RESPIRATOR MAY BE REQUIRED. AIR PURIFYING RESPIRATORS EQUIPPED WITH ORGANIC VAPOR CARTRIDGES AND A **HEPA (P100)** PARTICULATE FILTER MAY BE USED UNDER CERTAIN CONDITIONS WHEN A CARTRIDGE CHANGE-OUT SCHEDULE HAS BEEN DEVELOPED IN ACCORDANCE WITH THE **OSHA** RESPIRATORY PROTECTION STANDARD (**29 C.F.R. 1910.134**)

SECTION 9 Physical and Chemical Properties

Appearance	
Form	Granules/powder mix
Color	N/A
pH	~11-14
Melting/Freezing Temperature	N/A
Boiling Point	Not determined
Ignition Temperature	Higher than 93.3 deg C (200 deg F) Flash Point
Autoignition Temperature	Not applicable
Lower explosive limit; na	
Vapor Pressure	.not applicable
Vapor Density (air=1)	Not applicable
Specific Gravity (water=1 @39.2F)	n/A
Evaporation Rate (Bac=1)	N/P
Odor	None
Odor threshold	
Water Solubility	slight

SECTION 10 Stability and Reactivity

MATERIAL IS INERT AND STABLE.

CHROMIUM VI CONTENT IS NOT AN ISSUE FOR THIS MATERIAL - SHELF LIFE IS 6 MONTHS.

CONDITIONS TO AVOID : NOT APPLICABLE

MATERIALS TO AVOID : NOT APPLICABLE

HAZARDOUS DECOMPOSITION PRODUCTS : NONE.

SECTION 11 Toxicological Information

Inhalation: :May cause inflammation of the mucous membranes, an irritant to the respiratory tract at high concentrations.

Ingestion : The swallowing of small amounts is unlikely to cause any significant reaction. Larger doses may result in irritation of the gastro intestinal tract.

Eye irritation: Cements and hydrated lime are painful eye irritants. Mild exposure can cause soreness. Gross exposure or untreated mild exposures can lead to chemical burning and ulceration of the eye.

Skin Irritation: Cement and hydrated lime powder, especially in a water mix, may cause irritant contact dermatitis and or burns.

Long term toxicity :High repeated exposures in excess of the OES have been linked with rhinitis and coughing. Skin exposure has been linked to allergic (chromium VI) dermatitis.

Allergic dermatitis more commonly arises through contact with water mixtures than when dry.

Further information: Respirable crystalline silica dust may cause silicosis, a lung disease. Long term exposures to high levels of respirable crystalline silica can also lead to an increased risk of developing lung cancer.

SECTION 12 Ecological Information

Ecotoxicity: The addition of cement and hydrated lime to water will raise the pH and may therefore be toxic to aquatic life in some circumstances.

Mobility : The product is not volatile and insoluble in water, will accumulate in the ground.

Persistence and degradability: Mostly non-biodegradable. The hydrated lime will react with atmospheric and dissolved carbon dioxide to form calcium carbonate (e.g. chalk).

Bio accumulative potential : Not applicable.

Additional ecological information: High concentrations of lime and cement in water (>100 mg/l) may have a sterilizing effect in sewage works

SECTION 13 Disposal Considerations

Waste Disposal
 Unused Product/waste from cleaning etc.: Dispose of in accordance with local and national regulations.
 EWC Code: 08 01 99 (Not a hazardous waste)

Contaminated packaging: Contaminated packaging must not be disposed of as household waste.
 Not a hazardous waste.
 Use EWC Code: 150101 for paper, 150102 for plastic.

SECTION 14 Transport Information

Not classified as hazardous for transport.	
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SECTION 15 Regulatory Information

Classification according to EEC directive: Irritant

R-phrases
 R41 : Risk of serious damage to eyes.

S-phrases
 S22 : Do not breathe dust.
 S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 S28 : After contact with skin, wash immediately with plenty of water and soap.

S36/37/39 : Wear suitable protective clothing, gloves and eye/face protection.

Special provisions statement : None.

Hazardous component(s) which must be listed on the label: Cement/Hydrated Lime.

US EPA TSCA Status: All chemical ingredients are listed on the TSCA inventory.

Canada Domestic Substance List Status:
 All chemical ingredients are listed on the DSL

EC Directives: Dangerous Substances Directive, 67/548/EEC & adaptations.
 Dangerous Preparations Directive, 1999/45/EC.
 Safety Data Sheets Directive, 91/155/EEC and adaptations.

Statutory Instruments: Chemicals (Hazard Information & Packaging for Supply) Regs 2002.
 Control of Substances Hazardous to Health Regs 2002. Environmental Protection (Duty of Care) Regs. 1991. Codes of Practice
 Waste Management. The Duty of Care.
 Approved classification and labeling guide (Fifth edition). L131. The compilation of safety data sheets (Third edition).
 Guidance Notes Occupational Exposure Limits EH40
 CHIP for Everyone HSG(108)
 Construction Information Sheet No 26 (revision 2) CIS26(rev2) - Cement
 Construction Information Sheet No 36 (revision 1) CIS36(rev1) - Silica
 Chemical Hazard Alert Notice 35 – Respirable Crystalline Silica

SECTION 16 Other Information

Users of our products should take appropriate measures to ensure working practices are in accordance with the Control of Substances Hazardous to Health Regulations (COSHH).

Maximum exposure limits and Occupational Exposure Standards have been taken from EH40 Occupational Exposure Standards (from HSE Books).

Training Advice

Applicators need to be trained in:-
 Handling and hygiene associated with use of industrial chemicals.
 Correct mixing and application of the product.
 Correct cleaning and disposal methods.

HMIS Ratings

Health	:	2
Flammability	:	0
Reactivity	:	0

The product is intended for use by appropriately trained applicators in industrial situations. It is not suitable for use in home DIY applications, especially because of its hazardous nature and the protective measures required.

Notes - Do not use organic solvents for skin cleansing, it will lead to defatting of the skin, skin irritation and/or dermatitis. Some solvents can be absorbed through the skin. Beware of cross contamination where different products are in use in the same location. Take into account the Manual Handling regulations when dealing with the mixed product.

This safety data sheet is based on our present knowledge and experience and is intended to serve as a guide for safe handling of the product regarding to health and environmental aspects.

SECTION 1 Product and Company Information

PRODUCT NAME: Color Concentrate GENERIC NAME: Plastic Colorant DISTRIBUTOR: LSP Performance Resins 124 Speer Road Chestertown, MD 21620	Rainbow Colors 24 Hour Emergency Number - N/A Information Number: (877) 6 COLORS
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 This product contains no hazardous ingredients as defined under the criteria of the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. However, this MSDS contains information on the safe handling and proper use of the product. MSDS should be available for any person(s) in use of this product. Emergency Overview: Not expected to cause any adverse health effects when handled as recommended.	Potential Health Effects Inhalation: Not expected to be hazardous under standard conditions. Skin Contact: Not expected to be hazardous. Possible mild irritation. Eye Contact: Avoid eye contact. May cause eye irritation. Itching and redness after contact. Ingestion: Practically Non Toxic. Acute Effects: None Known. Chronic Effects: None Known.		
Carcinogenicity: Not listed by NTP Not Listed by IARC Not Listed by OSHA	Not listed Reproductive Effects : Not Available Teratogenic Effects: No evidence of mutagenetic effects	Signs and Symptoms of Overexposure:	
GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS			
	Health	Environmental	Physical
Eye Irritant Skin Irritant, sensitizer Respiratory Irritant	None Known	Not Classified	Not Classified
Pictogram:			

SECTION 3 Composition / Information on Ingredients

Confidential Information (Only provided upon request, at which the manufacturer has the right to refuse to provide information). No ingredients are present within this product, based on our knowledge, that are classified as hazardous and required to be reported.

SECTION 4 First Aid Measures

Inhalation:	Remove person to fresh air. If other respiratory symptoms develop, or person is breathing irregular, seek medical attention immediately.
Skin Contact:	Immediately wash the skin with soap and water. Remove any contaminated clothing. If irritation, redness, itching or burning develops, seek medical attention immediately.
Eye Contact:	Immediately flush eyes with plenty of water for at least 15 minutes. If irritation, redness, itching or burning develops, seek medical attention immediately.
Ingestion:	Induce vomiting if person is conscious and alert. Seek medical attention.

Material Safety Data Sheet Color Concentrate

Effective Date: 01/01/2015

Previous Revision date: 00/00/0000

Date Printed: 3/19/2015

SECTION 5 Fire Fighting Measures

FLAMMABILITY: NO FIRE OR EXPLOSION HAZARDS KNOWN.
FLASH POINT: NOT APPLICABLE
AUTO IGNITION TEMP: NO DATA
EXTINGUISHING MEDIA: DRY CHEMICAL, CO₂, WATER SPRAY OR REGULAR FOAM. AGENTS APPROVED FOR CLASS B HAZARDS.
SPECIAL EXPOSURE: REMOVE ALL PERSONS FROM THE AREA OF INCIDENT. ISOLATE THE SCENE AND ONLY ALLOW SUITABLE PERSONAL TO TAKE ACTION.
HAZARDOUS THERMAL: DECOMPOSE WITH EMISSION OF FUMES.
SPECIAL FIRE FIGHTING: EMPLOY TECHNIQUES THAT DO NOT CREATE DUSTS. FIRE- FIGHTERS SHOULD WEAR APPROPRIATE PROTECTIVE EQUIPMENT AND SELF-CONTAINED BREATHING APPARATUS WITH FULL FACE PIECE AND PROTECTIVE CLOTHING.

SECTION 6 Accidental Release Measures

Person Precautions: Only personal with proper training should take action, all others should evacuate the surrounding area.
Spills: Collection with shovels or vacuum and disposed of in properly labeled waste container. Clean area with detergent solutions. Provide adequate ventilations during clean-up.
Disposal Methods: Waste materials should be dumped or buried in an approved landfill, or incinerated in a suitable combustion chamber. Disposal must comply with all Federal, State and Local regulations.

SECTION 7 Handling and Storage

Storage: Store in cool, dry, well-ventilated area in sealed containers away from heat, open flames and oxidizing materials.
Handling: Use personal protective clothing. All persons in contain with this product should wash their hands and face before eating, drinking or smoking. See Section 8 for personal protection.

SECTION 8 Exposure Controls / Personal Protection

EXPOSURE GUIDELINES

PROTECTIVE CLOTHING: SYNTHETIC RUBBER GLOVES, APRON AND ARM COVERS TO AVOID SKIN CONTACT.
RESPIRATORY PROTECTION: IF NEEDED, USE MSHA-NIOSH APPROVED RESPIRATOR FOR DUST, MISTS AND FUMES. RESPIRATOR SHOULD BE CHOSEN BASED ON EXPOSURE LEVELS.
EYE PROTECTION: SAFETY GLASSES WITH SIDE SHIELDS ARE RECOMMENDED TO AVOID SPLASHES, MISTS OR DUSTS.
HYGIENE PROTECTION: AN EYE WASH STATION AND EMERGENCY SHOWER IN WORK AREA IS RECOMMENDED. APPROPRIATE TECHNIQUES SHOULD BE USED TO REMOVE ANY CONTAMINATED CLOTHING AND CLOTHING SHOULD BE WASHED BEFORE REUSING.
VENTILATIONS: ADEQUATE VENTILATIONS MUST BE PROVIDED. USE LOCAL EXHAUST TO KEEP EXPOSURE TO MINIMUM.

SECTION 9 Physical and Chemical Properties

Appearance	
Form	solid
Color	varies
pH	N/A
Melting/Freezing Temperature	N/A
Boiling Point	Not determined
Ignition Temperature	Not determined
Autoignition Temperature	Not applicable
Lower explosive limit; na	
Vapor Pressure	.not applicable
Vapor Density (air=1)	Not applicable
Specific Gravity (water=1 @39.2F)	N/A
Evaporation Rate (Bac=1)	N/P
Odor	None
Odor threshold	
Water Solubility	insoluble

SECTION 10 Stability and Reactivity

REACTIVITY: PRODUCT IS STABLE.

CONDITIONS TO AVOID: DIRECT HEATING, DIRT OR CHEMICAL CONTAMINATIONS.

INCOMPATIBLE MATERIALS: MAY REACT WITH STRONG OXIDIZING AGENTS.

HAZARDOUS

POLYMERIZATION: WILL NOT OCCUR UNDER NORMAL CONDITIONS.

HAZARDOUS

DECOMPOSITION: WILL NOT OCCUR UNDER NORMAL CONDITIONS. FIRE MAY PRODUCE IRRITATING, CORROSIVE AND/OR TOXIC GASES.

SECTION 11 Toxicological Information

United States:

- Acute Toxicity – Not Available
- Chronic Toxicity – Not Available
- Irritation/Corrosion – Not Available
- Sensitizer – Not Available
- Carcinogenicity – Not Available
- Mutagenicity – Not Available
- Teratogenicity – Not Available
- Reproductive Toxicity – Not Available

SECTION 12 Ecological Information

Biodegradability: Not determined

Aquatic Ecotoxicity: Not determined

Specific ecotoxicological data is not available for this product. Organic pigments and solvent dyes, in general, are not expected to be toxic to fish because of their negligible water solubility; thus, they are not readily bioavailability.

SECTION 13 Disposal Considerations

Waste Disposal

Waste should be avoided or minimized whenever possible. Containers or lines may contain residues after being emptied. Waste materials should be dumped or buried in an approved landfill, or incinerated in a suitable combustion chamber. Avoid areas that product could be in contact with soil, waterways, drains and sewers. Disposal must comply with all Federal, State and Local regulations.

SECTION 14 Transport Information	
Not classified as hazardous for transport.	DOT Classification: Not Regulated TDG Classification: Not Regulated Mexico Classification: Not Regulated UN/PIN Number: Not Regulated IATA-DGR Class: Not Regulated IMDG Class: Not Regulated ADR/RID Class: Not Regulated

SECTION 15 Regulatory Information

U.S. Federal Regulations:

HCS Classification: Not regulated.

TSCA 8b: All ingredients are listed or exempted.

SARA 302/304/311/312 Extremely hazardous substances:

No products were found.

Clean Water Act (CWA) 307/311:

No products were found.

CONEG: This product meets coneg regulations.

Clean Air Act (CCA) 112:
 This product neither contains nor is manufactured with ozone depleting substances.
 DEA List I & II Chemicals: Not Listed

OHSA Status:
 Not hazardous under criteria of federal hazardous communications standard 29 CFR 1910.1200.
 California Prop 65:
 To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.
 EU Regulations:
 Product is not classified or registered under EU legislation, but components within this product are authorized in accordance with the requirements of Commission Regulation (EU) No 1282/2011.
 International Regulations:
 Australia, China, Japan, Korea, New Zealand, Philippines:
 Not Determined

SECTION 16 Other Information

HMIS Rating:	Health	-1	
	Flammability	-1	
	Reactivity	-0	
	Personal Protection	-E	

Other Precautions: Do not transfer to unmarked containers. Follow DOT regulations. This product is not regulated as hazardous material by DOT.

Revision Date: 10/1/2013
 Revised to be in compliance with new GHS regulations due by 12/1/2013.

DISCLAIMER:
 The above information is provided on the data available to us and believed to be true and accurate. The information contained herein is offered in good faith and no warranty, expressed or implied, are made regarding the accuracy of this data since conditions or use is beyond our control. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Rainbow Colors, Inc. assumes no responsibilities for the use of handling of this product.

SECTION 1 Product and Company Information

PRODUCT NAME: SeamTek® UV13 Clear surface Coat Chemtrec
GENERIC NAME: Vinyl ester resin 24 Hour Emergency Number 1-800-424-9300
Information Number: 1-800-666-6216
DISTRIBUTOR: LSP Performance Resins
 124 Speer Road
 Chestertown, MD 21620
 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 – no known huma or animal health effects dada – these are expectations 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	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.
H315	Causes skin irritation	
H317	May cause an allergic skin reaction	
H318	Causes serious eye damage	

SECTION 3 Composition / Information on Ingredients

Chemical Name	CAS	Wt%
Unsaturated Vinyl ester Resin	See Index	Ap 25-85
Monomer(s)	See index	Ap 15-75

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 15 minutes. If sticky, use waterless cleaner first. 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. **PROMT ACTION IS ESSENTIAL**

INGESTION: If large quantity swallowed, give lukewarm water (pint) if victim is conscious. Get medical attention immediately. Wash out mouth with water. Move exposed person to fresh air. Do not induce vomiting as risk of damage to lungs exceeds poisoning risk. 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

High temperature, inhibitor depletion, accidental impurities, or exposure to radiation or oxidizers may cause spontaneous polymerization reaction, generating heat/pressure. Closed containers may rupture or explode during runaway polymerization.

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. Avoid exposure to sources of UV light. Store out of direct sunlight. Check inhibitor content often, adding to bulk liquid if needed. Do not blanket or mix with oxygen free gas as it renders inhibitor ineffective. Do not store below 32F – inhibitor can separate as a solid. If frozen, warm and remix material gently (<90F) . Prevent moisture contact. Keep container tightly closed and sealed until ready for use. Use only non sparking tools. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not 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
	NE	NE	NE	NE
	NE	NE	NE	NE
	NE	NE	NE	NE
	NE	NE	NE	NE
	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 A properly fitted, NIOSH/MSA approved respiratory protection equipment is recommended. 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	Straw to light yellow
pH	Not available
Melting/Freezing Temperature	Na
Boiling Point	Na
Flash Point	> 95 C/ 200 F
Ignition Temperature	Not available
Autoignition Temperature	Not available
Lower explosive limit; na	Upper explosive limit: na
Vapor Pressure	Na

Material Safety Data Sheet		UV13
Effective Date: 01/05/11	Previous Revision date: 00/00/0000	Date Printed: 3/19/2015

Vapor Density (air=1)	Not available
Specific Gravity (water=1 @39.2F)	AP 1.20 @25C/77C
Evaporation Rate (Bac=1)	N/DA
Odor	Mild to sweet acrylic
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 High temperatures, localized heat sources (ie) drum or band heaters), oxidizing conditions, freezing conditions, direct sunlight, UV radiation, inert gas blanketing,	
Materials to Avoid Reactive or incompatible with: acids, strong oxidizers, strong reducers, free radical initiators, inert gas, oxygen scavengers	
Hazardous Decomposition Products Decomposition products formed under fire conditions may include: Carbon oxides, acrid smoke fumes, other toxic vapors.	

SECTION 11 Toxicological Information	
Acute Toxicity Oral LD50 . Dermal LD50 Inhalation LC50 No data available Skin Corrosion/Irritation Skin Irritant Serious Eye Damage/Eye Irritation Eye Irritant Eyes Rabbit Respiratory or Skin Sensitization May cause skin or respiratory sensitization Mutagenicity	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 Persistent 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

Health Hazard;	2		
Flammability	1	0	
Physical Hazards	2	0	

NFPA Rating

SARA TITLE III: Section 311/312 Hazard Class

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

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).