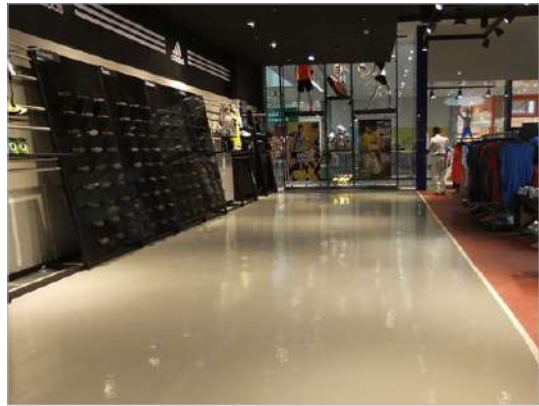


HERMETIC™ Neat

Flooring System



CSI Division 9: Finishes - Flooring

elite crete systems

Engineered High Performance Surfaces & Flooring

HERMETIC™ Neat Floor is a high build, self leveling, clear or pigmented resinous flooring system engineered for industrial applications.

TYPICAL AREAS OF USE

HERMETIC™ Neat Flooring Systems is intended for floors subject to medium to high foot traffic, fork lift and rubber wheel carts.

Typical uses include:

- Warehouses
- Manufacturing areas
- Laboratories & clean rooms
- Automobile service areas & garages
- Exhibition halls
- Medical & educational facilities
- Aircraft hangars

ADVANTAGES

- Ease of maintenance
- Protects the substrate
- Aesthetic improvements
- Increases the strength of the substrate
- Hard and abrasion resistant
- VOC free - CA 01350 air quality compliant
- Stain and chemical resistant
- Anti-microbial
- Satin or gloss finish
- Fast set available for quicker turn around time
- Electrostatic dissipative finish is optional

SPECIFICATION OVERVIEW

- Name: HERMETIC™ Neat Floor
- Finish: Gloss or satin
- Cured thickness: @ 40 to 65 mils
- Surface preparation and detailed application instructions per manufacturer
- Manufacturer: Elite Crete Systems, Inc. +1-219-465-7671

SAMPLE COLOR CHART



NOTE: The colors depicted on this technical document may not illustrate the exact color. Contact a technical support representative for a more accurate color sample. Custom colors available upon request. * Novalac Only

PHYSICAL PROPERTIES

(@ 73°F / 23°C, 7 day ambient cure as a coating)

PROPERTY	TEST	RESULT
VOC Content	N/A	0 g/l
Shore D Hardness	ASTM D-2240	80
Water Absorption (2hr boil)	ASTM D-570	0.03 %
Toxicity	N/A	None*
Heat Distortion Temperature	ASTM D-648	130 F / 55 C
Compressive Strength	ASTM D-695	12,300 psi
Tensile Strength	ASTM D-638	3,200 psi
Flexural Strength	ASTM D-790	4,800 psi
Abrasion Resistance **	ASTM D-4060	9 mg loss
Slant Shear	ASTM C-882	100% concrete failure
Flammability	ASTM D-635	Self-extinguishing
Flame Spread Rate (NFPA 101)	ASTM E-84	Class A
Elongation at Break	ASTM D-638	6.5 %
Perm Rating	ASTM E-96-13	>0.10 @ 16 mils. Class 1
Chemical resistance	Contact technical representative for chart	
Coefficient of Friction	Adjusted per requirement. Generally 0.50 to 0.80	
COF Guidelines:	ADA Flat Surfaces	0.60
	ADA Inclined Surfaces	0.80
	OSHA	0.50
	NFPA	0.68

* FDA & USDA Acceptable

** CS-17 Wheel, 1 KG load, 1,000 cycles



elite crete systems

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The information herein is general information to assist our customers in determining whether our products are suitable for their specific applications. Our products are intended for sale to commercial and industrial customers. We require that customers should inspect and test our products before use to satisfy themselves as to the content and suitability for the applications they intend to use our products for. Nothing herein shall constitute any warranty expressed or implied, including any warranty of merchantability or fitness for a particular purpose, nor is replacement of our materials and in no event shall we be liable for incidental or consequential damages.

MSDS.447 – E100-VB5™ Epoxy Vapor Barrier - Part B

Revised: 3.12.12

Material Safety Data Sheet

(Date of Revision 3/12/2012)

MSDS # 447 Part B**Product Name: E100-VB5™ Epoxy Vapor Barrier****Section: 1 – IDENTIFICATION****Product name:** E100-VB5™ Epoxy Vapor Barrier - Part B**Product Type** Emulsified Manic base adduct (Curing Agent for Coatings & Adhesives)**For Emergency Medical Assistance:**

Call Health & Safety Information Services: (1-866-303-6949)

For Emergency Transportation Information:

CHEMTREC US DOMESTIC (800-424-9300)

CHEMTREC INTERNATIONAL (703-527-3887)

CANUTEC, CA DOMESTIC (613-996-6666)

Company

Elite Crete Systems

1061 transport Drive

Valparaiso, IN 46383

Section: 2 – HAZARDS IDENTIFICATION

This Product is classified as non-hazardous as defined within OSHA Hazard Communication Standard 29CFR1910.1200

Classification: Corrosive to Skin & Eyes causes burns.**Emergency overview** RISK OF SERIOUS DAMAGE TO EYES CAN CAUSE SKIN BURNS. MAY CAUSE ALLERGIC SKIN REACTION. MAY CAUSE RESPIRATORY TRACT IRRITATION.**Potential acute health effects:****Skin:** Corrosive to Skin, Causes burns. Harmful in contact with skin. May cause skin sensitization by skin contact**Eye:** Corrosive to eyes. Causes eye burns, may cause blindness, severe eye irritation.**Ingestion:** May cause burns to mouth, throat, oesophagus and stomach. May cause respiratory failure**Inhalation:** Slightly irritating to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.**Chronic Effects:** Contains material that may cause target organ damage, Based on animal data**Carcinogenicity, Mutagenicity, Teratogenicity, Developing effects, Fertility effects,** > No critical hazards or significant effects**Over-exposure signs/symptoms****Inhalation:** Adverse symptoms may include the following: respiratory track irritation, coughing.**Ingestion:** Adverse symptoms may include the following: stomach pain**Skin:** Adverse symptoms may include the following: pain or irritation, redness, blistering may occur**Eyes:** Adverse symptoms may include the following: pain watering, redness, blindness**Medical conditions aggravated by over-exposure**

Pre-existing skin disorders and disorders involving any other target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product

See section: 11 for more detailed information on health effects and symptoms.**Section: 3 – COMPOSITION / INFORMATION ON INGREDIENTS**

<u>Components</u>	<u>CAS No.</u>	<u>Weight %</u>
Manic Base Adduct	N/A	40-70%

Section: 4 – FIRST AID MEASURES

Inhalation:	Remove victim to fresh air and provide oxygen if breathing is difficult. If fumes still present the rescuer should wear an appropriate mask or self contained breathing apparatus. Keep victim warm and at rest. If not breathing, or if breathing is irregular, or if respiratory arrest occurs provide artificial respiration or oxygen by trained personnel. It may be dangerous to provide mouth to mouth resuscitation. If unconscious get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours or more, consult physician's advice.
Skin Contact:	Wear protective Gloves at all times. Wash clothing with plenty of water before removing. Remove contaminated clothing/shoes and wipe excess from skin with plenty of clean potable water. Flush skin with clean potable water for at least fifteen minutes. (Chemical Burns must be treated promptly by a physician) . In the event of any complaints or symptoms, avoid further exposure. Get medical attention immediately. Show this sheet to doctor. Wash clothing before reuse. Contaminated leather articles including shoes cannot be decontaminated and should be destroyed to prevent reuse.
Eye Contact:	Flush eyes with plenty of clean potable water for at least 15 minutes while holding eyelids open. Check for and remove any contact lenses. Chemical burns must be treated immediately by a physician. Get medical attention immediately.
Ingestion:	<u>Do not induce vomiting.</u> If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Get medical attention immediately. Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at

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rest. If material has been swallowed and the exposed person is conscious; give small quantities of water to drink. **Stop** if exposed person feels sick as vomiting may be dangerous. Only induce vomiting if directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen all tight clothing, such as a collar, tie, belt, waistband etc.

Protection of first

aid personnel: No action shall be taken involving any personal risk without suitable training. If it is suspected that fumes are still present; the rescuer should wear an appropriate mask or self contained breathing apparatus (NIOSH approved). Read all instructions above before taking any action.

NOTES TO PHYSICIAN:

Symptoms: Irritation as noted above. Skin sensitization (allergy) may be evidenced by rashes, especially hives. Lung sensitization (e.g., allergy asthma) may be evidenced by wheezing with shortness of breath and cough.

Treatment: If more than 2.0 ml per kg has been ingested and vomiting has not occurred, emesis should be induced with supervision. Keep victims head below hips to prevent aspiration. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before emesis, gastric lavage using a cuffed endotracheal tube should be considered.

Section: 5 – FIRE FIGHTING MEASURES

Flammability of Product: If fire or if heated, Pressure increase will occur and the container may burst.

Flash Point: >220 F (104°C)

Flammable limits in Air: Not established for this product **Autoignition Temperature:** Not established for this product

Extinguishing Media: Use: water spray fog, CO2, dry chemical or Foam.

Specific hazards: Material will not burn or burst unless preheated. Do not use high volume water jet as it may spread fire. If fire has spread to containers, leave area immediately as the product may burst.

Special Protective Equipment for Firefighters: Do not enter confined space without full bunker gear helmet with face shield, bunker coats, protective gloves and rubber boots) including a positive pressure NIOSH approved or self contained breathing apparatus (SCBA).

Section: 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions: Isolate area, keep unnecessary and unprotected personnel from entering the involved area. No action shall be taken by any personnel without suitable training. Avoid contact with skin, eyes and clothing. Use appropriate safety gear and equipment as described in sections #5 and #8. Do not touch or walk thru area of spilled material. Avoid breathing vapor or mist. Provide adequate ventilation.

Environmental Precautions: Construct a Dyke and contain spill. Prevent contamination of soil and water. Prevent spreading or entering drains, ditches or waterways.

Clean up methods:

Small Spillage Take up with inert absorbent material and dispose of properly. If possible remove all containers from area. All material to be disposed of shall follow all Federal, State and local regulations for disposal of this material.

Large Spillage Remove with vacuum trucks or pump into storage/salvage vessels. Soak up residue with an inert absorbent material such as clay, sand or other suitable inert material and place in non-leaking containers for proper disposal. Flush area with water to remove trace residue. If possible stop flow of product.

Additional Advice: Notify authorities if any exposures to the general public or environment occurs or is likely to occur. See section #13 for information on disposal.

Section: 7 – HANDLING AND STORAGE

Handling: WARNING: Wear appropriate protective clothing as outlined above and a self contained NIOSH or SCBA breathing apparatus or respirator. Material may be slightly toxic if swallowed, and may cause burns internally and externally. Do not breath vapors or mist. Do not ingest. May cause skin sensitization. May possibly cause pulmonary sensitization. Containers, even those that have been emptied, can contain hazardous product residues. avoid skin contact. Wash with soap and water before eating, drinking, smoking, and applying cosmetics, or using toilet facilities. Launder contaminated clothing before reuse. Contaminated leather articles, including shoes, cannot be decontaminated and should be destroyed to prevent reuse. Empty containers containing residue can be hazardous. Do not reuse container. **Keep out of reach of children at all times.**

Storage: Store in a cool dry place with adequate ventilation. Keep away from open flames. Ideally, maintain storage temperature between 50-90°F (10-35°C). Do not store in unlabeled containers. Do not store near acids. Keep out of reach from Children. Keep container tightly sealed when not in use. Use appropriate containment to protect against and avoid environmental contamination.

Section: 8 – EXPOSURE CONTROLS & PERSONAL PROTECTION

CONSULT LOCAL AUTHORITIES FOR ACCEPTABLE EXPOSURE LIMITS.

Protective Measures: Wear appropriate NIOSH approved respirator and protective clothing, including protective Chemical goggles, gloves and boots.

Engineering Controls: Use ventilation as required to control vapor concentrations. Eye wash fountains and safety showers should be available for emergency use. Have protective clothing, chemical goggles, gloves and NIOSH approved respirators for personnel available at all times.

Eye Protection: Avoid contact with eyes. Wear Chemical goggles when around this product at all times.

Skin & Body Protection: Avoid prolonged or repeated contact with skin. Wear chemical-resistant gloves and other clothing as required to minimize contact.

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Respiratory Protection: Avoid breathing vapor or mists. Use a properly fitted NIOSH-approved respirator or other type of self contained apparatus as the anticipated exposure levels dictate as required to prevent overexposure. In accordance with 29 CFR 1910.134, use either a full-face, atmosphere-supplying respirator or air-purifying respirator for organic vapors.

Exposure Guidelines:

Components with workplace control parameters Benzene-1,3-dimethanamine (MXDA)	Regulation ceiling limit value ACGIH	Remarks 0.1 mg/m3
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Section: 9 – PHYSICAL & CHEMICAL PROPERTIES

Appearance:	Liquid	Color	slight haze to amber
Flash Point:	>104°C	Vapor pressure:	<17.70 mmHg @ 21°C
Relative Density:	1.08 (water=1)	Solubility in Water:	<completely
PH	Alkaline 11.2	Odor:	ammonia
Density	67.422 lb/ft ³ (1.08gm/cm ³)@70 F (21 C)	Boiling Point range:	212 °F (100°C)

Section: 10 – STABILITY & REACTIVITY

Stability:	Product is stable under normal conditions of storage and use.
Conditions to avoid:	Can react vigorously as a strong oxidizing agent, Extremes of temperature and direct sunlight. CAUTION: N-nitrosamines, are known as potent carcinogens, may be formed when the product comes in contact with nitrous acid or in atmosphere with high nitrous concentrations.
Materials to avoid:	Reactive or incompatible with the following materials: acids, hydroxyl compounds, sodium hypochlorite, reactive metals: sodium, calcium, zinc etc
Hazardous Decomposition Products:	Nitric acid, ammonia, Nitrogen oxides (NOx) Uncontrolled exothermic reaction of curing agent releases Carbon Monoxide, carbon dioxide, Phenolic compounds and acids may be formed during combustion. Aldehydes, Flammable Hydrocarbon fragments (e.g. acetylene).
Hazardous Reactions:	Under normal conditions, storage and use, Hazardous polymerization will not occur.

Section: 11 – TOXICOLOGICAL INFORMATION

Acute Health Hazard	
Ingestion:	LD50:500-2000 mg/kgm (species) rat
Inhalation:	No data is available on product itself
Skin:	LD50:>2,000 mg/kg Species: rabbit, method estimated
Eye Irritation/corrosion:	Severe eye irritation
Acute dermal	Moderate skin irritation
Irritation/corrosion:	
Sensitization:	May cause sensitization by skin contact
Chronic Health Hazard	No evidence of mutagenic activity

Section: 12 – ECOLOGICAL INFORMATION

Environmental effects	
Ecotoxicity effects:	
Aquatic Toxicity:	No data available on product itself
Toxicity to fish- Components	

Section 13 – DISPOSAL CONSIDERATIONS

Product Disposal:	Generation of waste should be avoided or minimized where ever possible. Disposal 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 disposal or dispersal of spilled material and runoff and contact with soil, waterways, drains, sewers.
Container Disposal:	Containers should be completely drained of all residual product prior to disposal in accordance with all Federal, State and Local requirements.

Section: 14 – TRANSPORTATION INFORMATION

REGULATORY INFORMATION:	UN NUMBER	Proper shipping name	class/PG
DOT:	NOT DANGEROUS GOODS		
CFR ROAD:	NOT DANGEROUS GOODS		
IMO/IMDG:	NOT DANGEROUS GOODS		
IATA Cargo:	NOT DANGEROUS GOODS		
TDG	NOT DANGEROUS GOODS		

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Section: 15 – REGULATORY INFORMATION

SARA TITLE III SECTION 311/312 (40CFR370): Acute health Hazard, Delayed (Chronic) health hazard
SARA TITLE III SECTION 313 (40CFR372): No reportable components
SARA TITLE III Section 302 (40CFR355), appendix A No Reportable components
US HCS Classification Corrosive material, sensitizing material, Target organ effects
US EPA CERCLA Status (40CFR302): No Reportable components
TSCA Inventory Status: No Reportable components
Canadian DSL Status: Report included (all components listed)
Canadian WHMIS Classification: D1B Material causing immediate and serious toxic effects
 D2B Material causing other toxic effects
 E Corrosive material
OSHA/NTP/IARC Carcinogen Status: Not listed
Chemicals known to the State of California to Cause Cancer or Reproductive Toxicity: none
New Jersey Right to know Chemical List: NOT LISTED
Pennsylvania Right to Know Chemical list Not Listed
Massachusetts right to know Chemical list Not Listed
Additional components not found in Section: NOT LISTED
California Safe Drinking Water & Toxic Enforcement Act (Proposition 65) none required
 This product does not contain any chemicals known to the State of California to cause cancer, birth defects or any other harm.
International Regulations
Chemical inventories: **Europe;** All components listed or exempt
Australia (AICS) All components listed or exempt
China (IECSC) All components listed or exempt
Korea (KECI) All components listed or exempt
Philippines (PICCS) All components listed or exempt
Japan (ENCS) All components listed or exempt
Canada All components listed or exempt
USA (TSCA 8b) All components listed or exempt

HMIS Health 2 Flammability 1, Physical hazards: 0. Chronic: * 1, Reactivity 0,

Section: 16 – OTHER INFORMATION

Reference: Prepared in accordance with 29 CFR 1910.1200 By Elite Crete Systems, R & D lab
 Health: 2
 Flammability: 1
 Physical Hazard: 0

PI.605 – PRODUCT INFORMATION: Maintenance – Neat Epoxy Flooring

Revised: 1.4.16

If general care is provided and recommended guidelines observed, the decorative appearance and life of all 100% Epoxy Product Flooring Systems will be extended.

Reasons why the floor must be maintained:

- Aesthetics – The floor will continue to look as it did when it was first installed.
- Safety – Regardless of the chosen texture of the floor, if it is not properly cleaned and maintained it may create a slip and fall accident.
- Longevity – The performance and life of the floor is contingent on the proper cleaning. Contaminants such as food, dirt and oil may break down the floor if left un-cleaned.

Care Immediately after Installation:

- The new flooring system should be allowed to fully cure before being used.

The following perimeters apply:

- Careful Foot traffic - 24 hours at 20°C, 48 hours at 8°C
- Full Mechanical and Chemical Loading - 7 days at 20°C, 14 days at 8°C
- Washing with water must not occur until the curing cycle is completed i.e. not within 7 days.

Cleaning:

Cleaning regularly is necessary to maintain the appearance and prolong the life of the flooring system. Proper cleaning begins with understanding the basic steps:

1. Removal of contaminant via sweeping or vacuuming.
 2. Use of cleaning product.
 3. Time required by the cleaning product to properly remove the contaminant.
 4. Removing of the cleaning product.
 5. Proper rinsing.
- A General Purpose Cleanser is an ideal product for epoxy resin floors.
 - The use of Washer Scrubber Dryer machines incorporating the recommended cleaners would be the best, most effective method of cleaning the floor.
 - Abrasive cleansers must not be used.
 - Acid based cleansers must not be used.
 - Strong alkali based cleansers must not be used in concentration form.
 - Solvent cleansers must not be used although some solvent "activated" cleansers are suitable.
 - Scraping of the surface should be avoided however plastic scrapers or squeegees with rounded corners are more gentle to the floors surface.

Polishing/Burnishing:

- Having washed the floor the application of approved clear polymer glaze coats or wax polishes are recommended to protect the upper surface from minor scratches and abrasions.
- Wax modified cleansers will provide improved scratch resistance. We recommend two or more coats are applied following a maintenance washing. Two or more coats can easily be applied in one day. Having done so repeated applications of polish should be made every three months -12 months depending upon requirement, usage and appearance of the floor.

Accidental Impact Damage:

- We advise contacting the installer as soon as possible to ensure remedial measures can be affected in order to retain the performance of the Epoxy Coating system and prevent water or chemical ingress into the damaged area.

Accidental Scratch or Scoring Damage:

- Should the flooring surface become scratched or scored by abrasive materials then we would immediately recommend the surface is cleaned with an approved cleanser and an approved polish or glaze coat is applied to the surface. This will protect the floor from further minor scratches. Repeat applications building up the thickness of the polish or glaze coat will provide improved scratch resistance.

Spillage's and Deposits:

- Regular sweeping and cleaning is advised as dirt and dust are abrasive and can prematurely age the surface. Spillage of chemicals i.e., petrol or oil should be cleaned up immediately as with all good cleaning procedures.
- After chemical spillage's, certain chemicals may cause some color changes. This usually is caused by a surface reaction only and will not impair the mechanical performance of the flooring system. If in doubt, contact Manufacturer or Installers for the flooring urgently.

Cleaning Methods:

1. Hand Cleaning:

- The floor can be cleaned by the use of a mop and bucket using our approved cleanser.
- It is important the floor is finally rinsed with clean water to avoid smearing contaminated water across the floor. The main problem associated with this cleaning method is drying the floor effectively without allowing contaminated water to puddle upon the surface and leave a dirty smear effect when dry.
- This method of cleaning is normally only recommended for cleansing small areas of localized spillage.

2. Washer Scrubber Dryer Machines:

- Technical advances in floor maintenance equipment over the past decade has provided industry with low cost, highly efficient machines applying low foam cleansers with vacuum suction drying. The use of these machines is recommended as being the most effective method of cleaning floors with minimum disruption.

3. Wet Vacuum Pick Up Machines:

- Having washed the floor with copious amounts of water and cleanser the floor can be dried efficiently by passing over the area with a Wet Vacuum Pick Up Machine. These machines will dry the floor extremely well leaving a clean dry surface.
- To achieve best results final rinsing with cold clean water may be necessary to remove and pick up any fine sediment of dirt that remains upon the surface.

4. Power Washing:

- A highly effective method of cleaning but difficult to control and to remove the large volumes of water left upon the floor. Should the floor levels be variable then water puddles maybe created and difficult to remove.

5. Steam Cleaning:

- The use of a steam cleaner is not recommended for this particular flooring system. Excessive heat shock may cause swelling, blistering and subsequent adhesion failure to this flooring system.

PI.728 – Installation Procedures: HERMETIC™ Neat Floor

Revised: 1.6.16

GETTING STARTED

Understanding the products for this finish and having experience prior to beginning a project is critical. It is recommended to consult with an Elite Crete Systems Technical Representative before beginning a project to discuss many facts that may impact the outcome.

SURFACE PREPARATION

Although the HERMETIC™ Neat Floor can be applied to substrates other than concrete as well, these installation procedures pertain only to a concrete substrate.

The concrete must be structurally sound and any repairs in the surface must be made in advance of the neat floor coating. The surface must be clean, dry and free of any previous sealers or petrochemicals. In general a CSP (concrete surface profile of 3 is recommended and this is achieved by means of mechanical abrasion (grind, shotblast, etc.).

APPLICATION PREPARATION

Carefully inspect the substrate to ensure it is ready to be coated. Look for loose drywall or debris under the drywall and remove if necessary. Mask off required areas and where the application will be terminated.

Choose a work area for mixing that will not result in contamination of the open containers of materials and protect that area from possible splash or spills. Perform a final inventory of required materials, tools, etc. Once the part A and part B components are mixed they must be applied immediately without delay.

APPLICATION STEPS

In some cases E100-VB5™ vapor barrier epoxy and primer will be required to protect against rising water or air vapor. However, understand this is an optional application and the installer needs to determine if it is required. Contact an Elite Crete Systems Technical Representative for assistance in making this determination.

The recommended amount to mix at a time depends on the size of the project, number of applicators and experience with the products.

1. (Optional) pour one part E100-VB5™ part A with one part E100-VB5™ part B into a clean, dry mixing container and add one pint of clean potable water per combined gallon of E100-VB5™. Example: one gallon of part A and one gallon of part B would require 2 pints of water.
2. Mix the combined products with a jiffy type of similar mixing blade for two full minutes. It is critical to scrape the entire side, bottom and where the side meets the bottom to ensure the materials are adequately and thoroughly mixed. Failure to mix properly may result in areas of the finish that will not cure properly or perform as well as intended.
3. Pour the mixed E100-VB5™ on the floor in ribbons based on the required square foot of the area to be coated. Do not pour in a puddle or in one isolated area as it will be difficult to move the material over the entire intended area. Use a 3/8" new, clean, delinted, shed free roller to evenly apply the material. Ensure that all areas are coated and free of voids. The target coverage is a rate of 250 to 300 square foot per combined mixed gallon. Failure to remain within that range may result in product failure. This coat will

take 5 to 7 hours before it can be recoated or proceeded to the next step. This coat must be dry before proceeding and the cure time can be effected based on factors such as air temperature, substrate temperature, humidity, etc. An optional but often recommended. If a second coat is applied, repeat this step before proceeding to the next step.

4. Inspect the coat of E100-VB5™ for surface debris or defects such as air bubbles. If an air bubble or void is found another full coat or a patch using E100-VB5™ is required to ensure the concrete substrate is completely sealed off.

NOTE: There are multiple options of products that can be used for this finish. Those are: E100-PT4™ Standard or Fast Set, E100-PT1 Standard or Fast Set, E100-UV1™, E100-UL7™, E100-VR1™, E100-FS4™ or SPARTIC-ALL™. This installation procedure is illustrating E100-PT4™ Standard Set for the color coat and AUS-V™ pigmented with AGG for the protective top coat. If a different product is specified or used, contact a Technical Representative to discuss differences and options ahead of time.

5. Mix the E100-PT4™ part A and part B in a clean mixing container/pail for two full minutes using the same recommendations and tips used in previous sections of this document. Pour the mixed E100-PT4™ on the floor in ribbons. Use a 3/8", new, clean, delinted, shed free roller to evenly apply the material. The target coverage is a rate of 100 to 125 square foot per combined mixed gallon. A notched squeegee can also be used for this step if preferred. Allow the floor to cure out. Cure is about 8 hours for Standard Set and 4 hours for Fast Set.

NOTE: Often times a second coat at the same coverage rate is required or specified. If this is the case, repeat step 5 before proceeding. It is also a common practice to apply an "Orange Peel" finish as the second or last coat rather than AUS-V™ to reduce costs. See document: *PI.124 – Quick Notes – Orange Peel Epoxy Finish*.

6. Mix the AUS-V™ part A, part B, liquid colorant and AGG in a clean mixing container/pail for two full minutes using the same recommendations and tips used in previous sections of this document. Pour the mixed AUS-V™ into a paint roller tray. Use a 3/8", new, clean, delinted, shed free roller to evenly apply the material. Use a second new roller to re-roll the AUS-V™ to remove overlap marks. On larger projects, it may become necessary to change out this dry roller as it becomes saturated with AUS-V™. The target coverage is a rate of 500 square foot per combined mixed gallon. Second or consecutive coats are optional.

In all cases, Elite Crete Systems resinous flooring systems must be applied per the instructions of each individual product in the system. Concrete surfaces must be structurally sound, clean and with proper surface preparation methods.

Elite Crete Systems shall not be responsible or liable for adhesion failures that are the result of poor workmanship, deficient substrates, the presence of alkalinity or salts or expanding aggregates and reinforcements such as rebar, wire mesh, drains or expansion joint materials.

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/28/2014

Revision: 10/28/2014

Trade Name: E100-PT1™ CRYSTAL CLEAR EPOXY – Part A

1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade Name: E100-PT1™ Part A

1.2 Article No.: E100-PT1™ Part B

1.3 Details of the supplier of the Safety Data Sheet Manufacturer:

Elite Crete Systems
1061 Transport Drive
Valparaiso, IN 46383
Toll Free: 888.323.4445
Tel: (219) 465-7671
Fax: (219) 531-0898
www.elitecrete.com

1.4 Emergency telephone number:

CHEMTREC US DOMESTIC: (800-424-9300)
CHEMTREC INTERNATIONAL: (703-527-3887)

2 Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 and GHS:

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H361fd, H411.

The following Hazard Statements are applicable only according to OSHA regulations within the United States. These Statements are not applicable for the CLP regulation (1272/2008/EC) in the EU: H361.

Skin Irrit. 2 H-315: Causes skin irritation
Eye Damage 1; H318: Causes serious eye damage.



GHS09 environment

Aquatic Chronic 2; H411: Toxic to aquatic life with long lasting effects.



GHS07 exclamation mark

Acute Tox. 2; H302: Harmful if swallowed.
Skin Sensitization 1; H317: May cause an allergic skin reaction. STOT SE 3; H335: May cause respiratory irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC:

Xn; Harmful. R22-62: Harmful if swallowed. Possible risk of impaired fertility. Xi; Sensitizing. R43: May cause sensitization by skin contact

Xi; Irritant. R37: Irritating to respiratory system. R22-48: Harmful if swallowed.

N; Dangerous for the environment. R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Information concerning particular hazards for human and environment:

The product has to be labeled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/28/2014

Revision: 10/28/2014

Trade Name: E100-PT1™ CRYSTAL CLEAR EPOXY – Part A

2.2 Label elements

Labeling according to Regulation (EC) No 1272/2008:

Hazard pictograms:



GHS07 GHS09

Signal Word: Warning

Hazard-determining components of labeling:

Bisphenol A based Epoxy Resin, Alkyl C-12-C-14 Glycidyl Ether

Hazard statements

H312: Harmful in contact with skin

H317: May cause an allergic skin reaction

H412: Harmful to aquatic life with long lasting effects

Precautionary statements

P264: Wash hands thoroughly after handling

P270: Do not eat, drink or smoke when using this product

P271: Use only in well ventilated area.

P273: Avoid release to the environment

P280: Wear protective gloves/protective clothing/eye protection/face protection

P337+P313: If eye irritation persists: Get medical advice/attention.

P370+P378: In case of fire: Use for extinction: CO₂, powder or water spray.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P391: Collect spillage.

P403+P235: Store in a well-ventilated place. Keep cool.

P501: Dispose of contents/container in accordance with local/regional/national/international regulations

2.3 Other hazards

Results of PBT and vPvB assessment:

PBT: Not applicable.

vPvB: Not applicable.

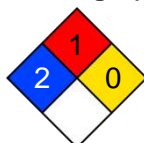
Hazard description:

Canadian WHMIS Classification: This product is categorized as a Class D Division 2B Materials causing other toxic effects, as per the Controlled Product Regulations

WHMIS-symbols:



NFPA ratings (scale 0 - 4)



Health = 2
Fire = 1
Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health	2
Fire	1
Reactivity	0

Health = 2
Fire = 1
Reactivity = 0

2.3 Other hazards

No known

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/28/2014

Revision: 10/28/2014

Trade Name: E100-PT1™ CRYSTAL CLEAR EPOXY – Part A

3 Composition/information on ingredients

3.2 Mixture.

Description: Mixture of substances listed below with nonhazardous additives.

Hazardous components:

Identification #	Description	WT. %
CAS: 25085-99-8 EINECS: Not Listed Index Number:	Bisphenol A based Epoxy Resin HAZARD CLASSIFICATION: [Xn] Harmful, [Xi] Irritant RISK PHRASES: R21, R34, R43, R52/53	< 85-92%
CAS: 68609-97-2 EINECS: 271-846-8 Index Number;	Alkyl C-12-C-14 Glycidyl Ether Skin Irritant 1, Skin Sens. 1, Muta. 2; Aquatic Chronic 2; R 43; Xi 38; R 38, R43.	< 8-15%

Additional information: Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).

4 First aid measures

4.1 Description of first aid measures

After inhalation:

If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention if breathing difficulty continues.

After skin contact:

Wash skin thoroughly after handling. Seek medical attention if irritation develops and persists. Remove contaminated clothing. Launder contaminated clothing before re-use.

After eye contact:

If product enters the eyes, open eyes while under gentle running water for at least 15 minutes. Seek medical attention.

After swallowing:

If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or MSDS with the victim to the health professional.

4.2 Most important symptoms and effects, both acute and delayed.

Acute: This material may cause irritation to skin and eyes. Product may cause an allergic skin reaction.

Chronic: Prolonged or repeated skin contact may cause allergic skin reaction or dermatitis.

Target Organs: **Acute:** Eye, Skin **Chronic:** Skin

Hazards: Pre-existing skin or eye problems may be aggravated by exposure to this product.

4.3 Indication of any immediate medical attention and special treatment needed:

Treat symptoms and reduce over-exposure.

5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: Carbon dioxide, foam, dry chemical, halon, water spray, sand, limestone powder.

5.2 Special hazards arising from the substance or mixture:

This product is a flammable liquid above flash point shown.

5.3 Advice for firefighters:

Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/28/2014

Revision: 10/28/2014

Trade Name: E100-PT1™ CRYSTAL CLEAR EPOXY – Part A

6 Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures:** Personnel should be trained for spill response operations.
- 6.2 Environmental precautions:** All work practices must be aimed at eliminating environmental contamination.
- 6.3 Methods and material for containment and cleaning up:** Evacuate area. Contain spill if safe to do so. Prevent entry into drains, sewers, and other waterways. Soak up spilled material with an absorbent material and pick up and place in an appropriate waste container for disposal. Do not mix with other wastes. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations).

7 Handling and storage

7.1 Precautions for safe handling

As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapors/mists generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:

Store between 10 and 50 °C (45 -125 °F) and avoid contact with skin and eyes. Do not store near acids or amines. Ground all transfer equipment. Good general housekeeping procedure should be followed. Do not eat drink or smoke while using the material. Emergency showers should be readily available. Material may partially freeze in cold temperatures which will result in crystals and haziness. If this occurs rewarm and homogenize. Avoid contact with skin eyes. Vapors may irritate eyes and will irritate the skin. Use only with good ventilation and PPE. Keep container closed when not in use.

7.3 Specific end use(s): No information

8 Exposure controls/personal protection

Additional information about design of technical facilities:

Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above. Use local exhaust ventilation to control airborne vapor. Ensure eyewash/safety shower stations are available near areas where this product is used.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

Currently, International exposure limits are not established for the components of this product. Please check with competent authority in each country for the most recent limits in place.

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

Respiratory protection: Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/28/2014

Revision: 10/28/2014

Trade Name: E100-PT1™ CRYSTAL CLEAR EPOXY – Part A

Protection of hands: Use chemical resistant gloves to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.

Protective gloves



Material of gloves:

The selection of suitable gloves does not only depend on the material, but also on the quality, and varies from manufacturer to manufacturer.

Penetration time of glove material:

The exact break through time has to be determined by the manufacturer of the protective gloves. DO NOT exceed the breakthrough time set by the Manufacturer.



Eye protection: Safety glasses or chemical goggles as appropriate to prevent eye contact. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.

Tightly sealed goggles

Body Protection:

Use body protection appropriate to prevent contact (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form:

Liquid

Color:

Clear – Slight amber haze

Odor:

Mild epoxy odor

Odor threshold:

Not Available

pH-value:

Not Available

Change in condition

Melting point/Melting range:

No data available

Boiling point/Boiling range:

>200°C

Flash point:

>392°F (>200°C)

Flammability (solid, gaseous):

No data available

Auto/Self-ignition temperature:

Not established

Decomposition temperature:

No data available

Self-igniting:

No data available

Danger of explosion:

This product is a flammable liquid above flash point shown above.

Explosion limits

Lower:

Not established

Upper:

Not established

Vapor pressure at 25 °C:

<0.1 mmHg

Density at 20°C:

9.45 lbs. per gallon, specific gravity 1.13

Relative density:

No data available

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/28/2014

Revision: 10/28/2014

Trade Name: E100-PT1™ CRYSTAL CLEAR EPOXY – Part A

Vapor density:	No data available
Evaporation rate:	No data available
Solubility in / Miscibility with Water:	Not Available
Specific Gravity 20oC: (Water = 1):	Not Available
Viscosity:	
Dynamic:	No data available
Kinematic:	No data available
Solvent content:	
Organic solvents:	No data available
VOC (EC)	No data available
9.2 Other information	No data available

10 Stability and reactivity

10.1 Reactivity

10.2 Chemical stability: Product is stable

Thermal decomposition / conditions to be avoided: When heated to decomposition this product produces noxious gases such as CO, CO₂, hydrocarbons and soot.

10.3 Possibility of hazardous reactions: No data available

10.4 Conditions to avoid: Contact with incompatible materials

10.5 Incompatible materials: Oxidizing agents and amines should be avoided as these will cause exothermic polymerization. Avoid extreme heat

10.6 Hazardous decomposition products: Will not occur

11 Toxicological information

11.1 Information on toxicological effects: Toxicity data is available for this product

Acute toxicity:

Acute Dermal	LD 50	>20,000 mg/kg	Rabbit
Acute Oral	LD 50	>5,000 mg/kg	Rat

Primary irritant effect: Contact with this product can be irritating to exposed skin and eyes.

Sensitization: This product is considered a skin sensitizer.

Additional toxicological information:

None of the ingredients are found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, IARC and therefore is not considered to be, nor suspected to be a cancer-causing agent by these agencies.

Reproductive toxicity information:

No information concerning the effects of this product and its components on the human reproduction system.

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/28/2014

Revision: 10/28/2014

Trade Name: E100-PT1™ CRYSTAL CLEAR EPOXY – Part A

12 Ecological information

12.1 Toxicity

Aquatic toxicity: No evidence is currently available on this product's effects on aquatic life.

Component Data: CAS# 25085-99-8

Fathead Minnow LC50 3 mg/l 96 h

Toxicity to daphnia magna EC50 1.4 -1.7 mg/l 24 h

Bacteria: IC50 >42.6 mg/l 18 h

Biodegradation: 28 days 12% OECD

Bioaccumulation: Not readily biodegradable

12.2 Persistence and degradability: No data available

12.3 Bio accumulative potential: No data available

12.4 Mobility in soil: No evidence is currently available on this product's effects on plants or animals.

Ecotoxical effects:

Remark:

Additional ecological information: No data available

General notes: No specific data is available for this product, however this product is expected to be readily biodegradable

13 Disposal considerations

13.1 Waste treatment methods

Recommendations:

Waste disposal must be in accordance with appropriate Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

RCRA WASTE CODE: None Listed

EU WASTE CODE: Not Listed

14 Transport information

14.1 UN-Number

DOT: CAN:

NOT REGULATED

ADN: ADR: IMDG: IATA:

UN 3082

14.2 UN proper shipping name

DOT: CAN:

NOT REGULATED

ADN: ADR: IMDG: IATA:

Environmentally Hazardous Substance liquid,
N.O.S. (Bisphenol A epoxy resin)

14.3 Transport hazard class(es)

DOT: CAN:



ADR: ADN: IMDG: IATA



14.4 Packing group

DOT: CAN:

NOT REGULATED

ADN: ADR: IMDG :IATA

PG III

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/28/2014

Revision: 10/28/2014

Trade Name: E100-PT1™ CRYSTAL CLEAR EPOXY – Part A

14.5 Environmental hazards

Product contains environmentally hazardous substances: reaction Products of Epichlorohydrin and Bisphenol A)

Marine Pollutant:

YES

Special Marking (ADR):



Notes: marine pollutant (IMDG code 2.9.3). For air transport, see special provision A97. (ICAO/IATA). **For surface shipments within the USAL Not Regulated.**

14.6 Special precautions for user

Danger code (Kemler):

NOT APPLICABLE

EMS Number:

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:

NOT APPLICABLE

Transport/Additional information

ADR

Tunnel restriction code

NOT APPLICABLE

UN "Model Regulation":

NOT APPLICABLE

15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture. United States (USA)

SARA: This product is not subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act.: None

Section 355 (extremely hazardous substances): None of the ingredients are listed.

Section 313 (Toxic Release Inventory): None of the ingredients are listed.

TSCA (Toxic Substances Control Act): All ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients is listed.

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed

Canadian Ingredient Disclosure list (limit 0.1%):

None of the ingredients are listed.

Canadian Ingredient Disclosure list (limit 1%):

None of the ingredients are listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/28/2014

Revision: 10/28/2014

Trade Name: E100-PT1™ CRYSTAL CLEAR EPOXY – Part A

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases:

H312: Harmful in contact with skin

H317: May cause an allergic skin reaction

H412: Harmful to aquatic life with long lasting effects

R21: Harmful in contact with skin

R34: Causes burns

R43: May cause sensitization by skin contact.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation.

IATA: International Air Transport Association.

ACGIH: American Conference of Governmental Industrial Hygienists.

EINECS: European Inventory of Existing Commercial Chemical Substances.

ELINCS: European List of Notified Chemical Substances.

CAS: Chemical Abstracts Service (division of the American Chemical Society).

NFPA: National Fire Protection Association (USA).

HMIS: Hazardous Materials Identification System (USA).

LC50: Lethal concentration, 50 percent.

LD50: Lethal dose, 50 percent.

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/20/2014

Revision: 10/20/2014

Trade Name: E100-PT1™ – Crystal Clear Epoxy – Part B

1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade Name: E100-PT1™ Part B

1.2 Article No.: E100-PT1™ Part B

1.3 Details of the supplier of the Safety Data Sheet Manufacturer:

Elite Crete Systems
1061 Transport Drive
Valparaiso, IN 46383
Toll Free: 888.323.4445
Tel: (219) 465-7671
Fax: (219) 531-0898
www.elitecrete.com

1.4 Emergency telephone number:

CHEMTREC US DOMESTIC: (800-424-9300)
CHEMTREC INTERNATIONAL: (703-527-3887)

2 Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 and GHS:

Reproductive Toxicity Category 2
Acute Inhalation Toxicity Category 4
Acute Oral Toxicity Category 4
Skin Sensitization Category 1
Skin Corrosion/Irritation Category 2
Acute Aquatic Toxicity Category 1
Chronic Aquatic Toxicity Category 2

Classification according to Directive 1999/45/EC:



C; Corrosive.



R34: Causes burns.



Xn; Harmful.



R22: harmful if swallowed.



Xi; Sensitizing.



R43: May cause sensitization by skin contact.



N; Dangerous for the environment



R50: Very toxic to aquatic organisms.

Information concerning particular hazards for human and environment:

The product has to be labeled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification System:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

2.2 Label elements

Labeling according to Regulation (EC) No 1272/2008:

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/20/2014

Revision: 10/20/2014

Trade Name: E100-PT1™ – Crystal Clear Epoxy – Part B

Hazard pictograms:



GHS05 GHS07 GHS08 GHS09

Signal Word: Danger

Hazard-determining components of labeling:

Contains: Benzene- 1,3-Diamethanamine, Trimethylhexamine-1,6-Diamine. May produce an allergic skin reaction.

Hazard statements:

- H361: Suspected of damaging fertility or the unborn child.
- H302: Harmful if swallowed.
- H332: Harmful inhaled.
- H315: Causes skin irritation.
- H317: May cause an allergic skin reaction.
- H400: Very toxic to aquatic life.
- H401: Very toxic to aquatic life with long lasting effects.

Precautionary statements

- P260: Do not breathe dust/fume/gas/mist/vapors/spray
- P264: Wash hands thoroughly after handling
- P270: Do not eat, drink or smoke when using this product
- P271: Use only in well ventilated area.
- P273: Avoid release to the Environment
- P280: Wear protective gloves/protective clothing/eye protection/face protection
- P337+P313: If eye irritation persists: Get medical advice/attention.
- P370+P378: In case of fire: Use for extinction: CO₂, powder or water spray.
- P302+P352: IF ON SKIN: Wash with plenty of soap and water.
- P391: Collect spillage.
- P403+P235: Store in a well-ventilated place. Keep cool.
- P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard description:

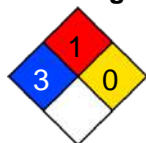
Canadian WHMIS Classification:

- D2B – Toxic material causing other toxic effects.
- E – Corrosive material

WHMIS-symbols:



NFPA ratings (scale 0 – 4)



Health = 3
Fire = 1
Reactivity = 0

HMIS-ratings (scale 0 – 4)

Health	3
Fire	1
Reactivity	0

Health = 3
Fire = 1
Reactivity = 0

2.3 Other hazards

No known

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/20/2014

Revision: 10/20/2014

Trade Name: E100-PT1™ – Crystal Clear Epoxy – Part B

3 Composition/information on ingredients

3.2 Mixture.

Description: Mixture of substances listed below with nonhazardous additives.

Hazardous components:

Identification #	Description	WT. %
CAS: 98-54-4 EINECS: 202-679-0	Paratertiarybutyphenol HAZARD CLASSIFICATION: [C] Corrosive. [N] Dangerous to the Environment RISK PHRASES: R34, R51/53	28– 35%
CAS: 1477-55-0 EINECS: 216-032-5	Benzene-1,3-dimethanamine HAZARD CLASSIFICATION: [C] Corrosive RISK PHRASES: R34	20– 35%
CAS: 25620-58-0 EINECS: 247-134-8	Trimethylhexamethylenediamine HAZARD CLASSIFICATION: [Xn] Harmful RISK PHRASES: R37, R43	12 – 30%
CAS: 25154-52-3 EINECS: 246-672-0	Nonyl Phenol HAZARD CLASSIFICATION: Repr Cat 3, [Xn] Harmful, [C] Corrosive, [N] Dangerous to the Environment RISK PHRASES: R22, R62, R63, R34, R50/53	1 – 5%
CAS: 9046-10-0	Alpha-(2-Aminomethyl)omega-(2-aminomethylethoxy)-poly(oxy)(methyl-1,2-ethanediyl) HAZARD CLASSIFICATION: (Xn) Harmful RISK PHRASES: R36/38; Xi R43; N51/53; Aquatic Chronic 3, H412; Skin Irrit. 1C, H314, Eye Irrit. 2,H319, Skin Sens 1, H317	10-20%

Additional information: Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).

4 First aid measures

4.1 Description of first aid measures

After inhalation:

If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention if breathing difficulty continues.

After skin contact:

Wash skin thoroughly after handling. Seek medical attention if irritation develops and persists. Remove contaminated clothing. Launder contaminated clothing before re-use.

After eye contact:

If product enters the eyes, open eyes while under gentle running water for at least 15 minutes. Seek medical attention if irritation develops.

After swallowing:

If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or MSDS with the victim to the health professional.

4.2 Most important symptoms and effects, both acute and delayed.

Acute: This material is harmful if inhaled and may cause delayed lung injury. This material may cause irritation to the respiratory tract and skin and even burns. Product may cause an allergic skin reaction.

Chronic: Prolonged or repeated skin contact may cause dermatitis.

Target Organs: **Acute:** Eye, Respiratory System, Skin **Chronic:** Skin

Hazards: Pre-existing skin or respiratory system problems may be aggravated by exposure to this product.

4.3 Indication of any immediate medical attention and special treatment needed:

Treat symptoms and reduce over-exposure.

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/20/2014

Revision: 10/20/2014

Trade Name: E100-PT1™ – Crystal Clear Epoxy – Part B

5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

Carbon dioxide, foam, dry chemical, halon, water spray, sand, limestone powder.

5.2 Special hazards arising from the substance or mixture:

This product is flammable above flash point indicated above.

5.3 Advice for firefighters:

Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures: Personnel should be trained for spill response operations.

6.2 Environmental precautions: All work practices must be aimed at eliminating environmental contamination.

6.3 Methods and material for containment and cleaning up: Contain spill if safe to do so. Prevent entry into drains, sewers, and other waterways. Soak up with a non-combustible absorbent material and place in an appropriate container for disposal. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations).

7 Handling and storage

7.1 Precautions for safe handling

As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapors/mists generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:

Store between 5° and 300C and avoid contact with skin and eyes. Do not store near acids. Ground all transfer equipment. Hold bulk storage under a nitrogen blanket. This product should not come in contact with copper or copper-bearing alloys. Containers of this product must be properly labeled. Nitrogen purging of containers is ideal and good practice.

7.3 Specific end use(s): No information

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/20/2014

Revision: 10/20/2014

Trade Name: E100-PT1™ – Crystal Clear Epoxy – Part B

8 Exposure controls/personal protection

Additional information about design of technical facilities:

Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above.
Use local exhaust ventilation to control airborne vapor. Ensure eyewash/safety shower stations are available near areas where this product is used.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

Currently, International exposure limits are not established for the components of this product. Please check with competent authority in each country for the most recent limits in place.

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

Respiratory protection: Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

Protection of hands: Use chemical resistant gloves to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.



Protective gloves

Material of gloves:

The selection of suitable gloves does not only depend on the material, but also on the quality, and varies from manufacturer to manufacturer.

Eye protection: Safety glasses or chemical goggles as appropriate to prevent eye contact. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.



Safety goggles

Body Protection:

Use body protection appropriate to prevent contact (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form:

Liquid

Color:

Clear pale straw color

Odor:

Mild epoxy odor

Odor threshold:

Not Available

pH-value:

Not Available

Change in condition

Melting point/Melting range:

No data available

Boiling point/Boiling range:

>392°F (200°C)

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/20/2014

Revision: 10/20/2014

Trade Name: E100-PT1™ – Crystal Clear Epoxy – Part B

Flash point:	>392°F (>200°C)
Flammability (solid, gaseous):	No data available
Auto/Self-ignition temperature:	Not established
Decomposition temperature:	No data available
Self-igniting:	No data available
Danger of explosion:	This product is a flammable liquid above flash point shown above.
Explosion limits	
Lower:	Not established
Upper:	Not established
Vapor pressure at 20 °C:	<0.1 mmHg @ 25°C
Density at 20°C:	No data available
Relative density:	8.10 pounds per gallon @ 25°C (SP 0.972)
Vapor density:	No data available
Evaporation rate:	No data available
Solubility in / Miscibility with Water:	Not Available
Specific Gravity 20oC: (Water = 1):	Not Available
Viscosity:	
Dynamic:	No data available
Kinematic:	No data available
Solvent content:	
Organic solvents:	No data available
VOC (EC)	No data available
9.2 Other information	No data available

10 Stability and reactivity

10.1 Reactivity

10.2 Chemical stability: Product is stable

Thermal decomposition / conditions to be avoided: When heated to decomposition this product produces noxious gases such as CO, CO₂, NO_x, amines, ammonia and others.

10.3 Possibility of hazardous reactions: No data available

10.4 Conditions to avoid: Contact with incompatible materials

10.5 Incompatible materials: Oxidizing agents and amines should be avoided as these will cause exothermic polymerization. Avoid extreme heat

10.6 Hazardous decomposition products: Will not occur

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/20/2014

Revision: 10/20/2014

Trade Name: E100-PT1™ – Crystal Clear Epoxy – Part B

11 Toxicological information

11.1 Information on toxicological effects: Toxicity data is available for this product

Acute toxicity:

Acute Dermal	LD 50	>2,000 mg/kg	Rabbit
Acute Oral	LD 50	1,750 mg/kg	Rat

Primary irritant effect: Contact with this product can be irritating to exposed skin, eyes and respiratory system.

Sensitization: This product is considered a skin sensitizer.

Additional toxicological information:

None of the ingredients are found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, IARC and therefore is not considered to be, nor suspected to be a cancer-causing agent by these agencies. CAS# 64742-53-6 is classified in the EU as a possible cancer causing material.

Reproductive toxicity information: No information concerning the effects of this product and its components on the human reproduction system.

12 Ecological information

12.1 Toxicity

Aquatic toxicity: No data available

12.2 Persistence and degradability: No data available

12.3 Bioaccumulative potential: No data available

12.4 Mobility in soil: No evidence is currently available on this product's effects on plants or animals.

Ecotoxicological effects:

Remark:

Additional ecological information: No data available

General notes:

Component Information:

nonyl phenol CAS# 25154-52-3

Acute Fish Toxicity 96 hr LC50 0.13 mg/l fathead minnow (Pimephales promelas)

48 hr EC50 0.19 mg/l Daphnia Magna

Harmful to aquatic organisms. May cause long term damage to environment

13 Disposal considerations

13.1 Waste treatment methods

Recommendations:

Waste disposal must be in accordance with appropriate Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

RCRA WASTE CODE: D002

EU WASTE CODE: To Be Established

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/20/2014

Revision: 10/20/2014

Trade Name: E100-PT1™ – Crystal Clear Epoxy – Part B

14 Transport information

14.1 UN-Number

DOT: CAN: ADN: IMDG: IATA: UN 2735
ADR UN2735

14.2 UN proper shipping name

DOT: CAN: ADN: IMDG: IATA: Amines, Liquid, Corrosive, N.O.S. (Contains Benzene-1,3-Dimethanamine, Trimethylhexane-1,6-Diamine)
ADR 2735 Amines, Liquid, Corrosive, N.O.S. (Contains Benzene-1,3-Dimethanamine, Trimethylhexane-1,6-Diamine)

14.3 Transport hazard class(es)

DOT: CAN: ADN: IMDG: IATA: 8 Corrosive substances

CLASS:

LABELS:



ADR:

CLASS:

8 (C7) Corrosive substances

LABELS:



14.4 Packing group

DOT: CAN: ADR: ADN: IMDG: IATA: PG II

14.5 Environmental hazards:

Marine pollutant: YES

Special marking (ADR)



14.6 Special precautions for user

Danger code (Kemler): Warning Corrosive substances
EMS Number: 80 F-A,S-B

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:

No data available

Transport/Additional information

ADR

Limited Quantities (LQ)
Excepted Quantities (EQ)

5L
Code E1
Maximum net quantity per inner packaging 30 ml
Maximum net quantity per outer packaging 1000ml

Transport category
Tunnel restriction code

3
E

UN "Model Regulation":

UN2735 Amines, Liquid, Corrosive, N.O.S. (Contains Benzene-1,3-Dimethanamine, Trimethylhexane-1,6-Diamine), 8, II

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/20/2014

Revision: 10/20/2014

Trade Name: E100-PT1™ – Crystal Clear Epoxy – Part B

15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture.
United States (USA)

SARA: This product is not subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act.: None

Section 355 (extremely hazardous substances): None of the ingredients are listed.

Section 313 (Toxic Release Inventory): None of the ingredients are listed.

TSCA (Toxic Substances Control Act): All ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients is listed.

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed

Canadian Ingredient Disclosure list (limit 0.1%):

None of the ingredients are listed.

Canadian Ingredient Disclosure list (limit 1%):

None of the ingredients are listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Hazard statements:

H361: Suspected of damaging fertility or the unborn child.

H302 Harmful if swallowed.

H332: Harmful inhaled.

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H400: Very toxic to aquatic life.

H401: Very toxic to aquatic life with long lasting effects.

Precautionary statements

P260: Do not breathe dust/fume/gas/mist/vapors/spray

P264: Wash hands thoroughly after handling

P270: Do not eat, drink or smoke when using this product

P271: Use only in well ventilated area.

P273: Avoid release to the Environment

P280: Wear protective gloves/protective clothing/eye protection/face protection

P337+P313: If eye irritation persists: Get medical advice/attention.

P370+P378: In case of fire: Use for extinction: CO₂, powder or water spray.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P391: Collect spillage.

P403+P235: Store in a well-ventilated place. Keep cool.

P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation.

IATA: International Air Transport Association.

ACGIH: American Conference of Governmental Industrial Hygienists.

EINECS: European Inventory of Existing Commercial Chemical Substances.

ELINCS: European List of Notified Chemical Substances.

CAS: Chemical Abstracts Service (division of the American Chemical Society).

NFPA: National Fire Protection Association (USA).

HMIS: Hazardous Materials Identification System (USA).

LC50: Lethal concentration, 50 percent.

LD50: Lethal dose, 50 percent.

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/22/2014

Revision: 10/22/2014

Trade Name: E100-VB5™ - Epoxy Vapor Barrier – Part A

1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade Name: E100-VB5™ Part A

1.2 Article No.: E100-VB5™ Part A

1.3 Details of the supplier of the Safety Data Sheet Manufacturer:

Elite Crete Systems
1061 Transport Drive,
Valparaiso, IN 46383
Toll Free: 888.323.4445
Tel: (219) 465-7671
Fax: (219) 531-0898
www.elitecrete.com

1.4 Emergency telephone number:

CHEMTREC US DOMESTIC: (800-424-9300)
CHEMTREC INTERNATIONAL: (703-527-3887)

2 Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 and GHS: Not Classified

Classification according to Directive 1999/45/EC: [Xn] Harmful, [N] Dangerous to the Environment

Information concerning particular hazards for human and environment:

Product Description: This product is a water –white – pale straw colored liquid with a mild epoxy odor.

Health Hazards: Mild to moderate eye, skin and respiratory system irritant. Harmful if swallowed. May cause skin sensitization

Flammability Hazards: This product is Flammable above its flash point of 340°F (170°C)

Reactivity Hazards: None known.

Environmental Hazards: The environmental effects of this product have not been investigated; however it is not expected to cause significant adverse effects.

Emergency Considerations: Emergency responders must wear the proper personal protective equipment (and have appropriate fire-suppression equipment) suitable for the situation to which they are responding.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data

2.2 Label elements

Labeling according to Regulation (EC) No 1272/2008:

Hazard pictograms:



GHS07



GHS09

Signal Word: Warning

Hazard-determining components of labeling: Bisphenol A based Epoxy Resin

Hazard statements

H312: Harmful in contact with skin

H317: May cause an allergic skin reaction

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/22/2014

Revision: 10/22/2014

Trade Name: E100-VB5™ - Epoxy Vapor Barrier – Part A

Precautionary statements

P264: Wash hands thoroughly after handling
 P270: Do not eat, drink or smoke when using this product
 P271: Use only in well-ventilated area.
 P273: Avoid release to the environment
 P280: Wear protective gloves/protective clothing/eye protection/face protection
 P337+P313: If eye irritation persists: Get medical advice/attention.
 P370+P378: In case of fire: Use for extinction: CO₂, powder or water spray.
 P302+P352: IF ON SKIN: Wash with plenty of soap and water.
 P391: Collect spillage.
 P403+P235: Store in a well-ventilated place. Keep cool.
 P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

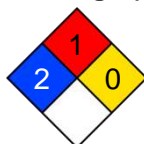
Hazard description:

Canadian WHMIS Classification: This product is categorized as a Class D Division 2B Materials causing other toxic effects, as per the Controlled Product Regulations

WHMIS-symbols:



NFPA ratings (scale 0 - 4)



Health = 2
 Fire = 1
 Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health	2
Fire	1
Reactivity	0

Health = 2
 Fire = 1
 Reactivity = 0

2.3 Other hazards

No known

3 Composition/information on ingredients

3.2 Mixture.

Description: Mixture of substances listed below with nonhazardous additives.

Hazardous components:

Identification #	Description	WT. %
CAS: 25085-99-8 EINECS: Not Listed Index Number:	Bisphenol A based Epoxy Resin HAZARD CLASSIFICATION: [Xn] Harmful, [Xi] Irritant RISK PHRASES: R21, R34, R43, R52/53	< -91%
CAS: 68609-97-2 EINECS: 271-846-8 Index Number;	Alkyl C-12-C-14 Glycidyl Ether Skin Irritant 1, Skin Sens. 1, Muta. 2; Aquatic Chronic 2; R 43; Xi 38; R 38, R43.	< 9%

Additional information: Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/22/2014

Revision: 10/22/2014

Trade Name: E100-VB5™ - Epoxy Vapor Barrier – Part A

4 First aid measures

4.1 Description of first aid measures

After inhalation:

If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention if breathing difficulty continues.

After skin contact:

Wash skin thoroughly after handling. Seek medical attention if irritation develops and persists. Remove contaminated clothing. Launder contaminated clothing before re-use.

After eye contact:

If product enters the eyes, open eyes while under gentle running water for at least 15 minutes. Seek medical attention.

After swallowing:

If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or MSDS with the victim to the health professional.

4.2 Most important symptoms and effects, both acute and delayed.

Acute: This material may cause irritation to skin and eyes. Product may cause an allergic skin reaction.

Chronic: Prolonged or repeated skin contact may cause allergic skin reaction or dermatitis.

Target Organs: **Acute:** Eye, Skin **Chronic:** Skin

Hazards: Pre-existing skin or eye problems may be aggravated by exposure to this product.

4.3 Indication of any immediate medical attention and special treatment needed:

Treat symptoms and reduce over-exposure.

5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: Carbon dioxide, foam, dry chemical, halon, water spray, sand, limestone powder.

5.2 Special hazards arising from the substance or mixture:

This product is a flammable liquid above flash point shown.

5.3 Advice for firefighters:

Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Personnel should be trained for spill response operations.

6.2 Environmental precautions:

All work practices must be aimed at eliminating environmental contamination.

6.3 Methods and material for containment and cleaning up:

Evacuate area. Contain spill if safe to do so. Prevent entry into drains, sewers, and other waterways. Soak up spilled material with an absorbent material and pick up and place in an appropriate waste container for disposal. Do not mix with other wastes. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations).

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/22/2014

Revision: 10/22/2014

Trade Name: E100-VB5™ - Epoxy Vapor Barrier – Part A

7 Handling and storage

7.1 Precautions for safe handling

As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapors/mists generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:

Store between 10 and 50 °C (45 -125 °F) and avoid contact with skin and eyes. Do not store near acids or amines. Ground all transfer equipment. Good general housekeeping procedure should be followed. Do not eat drink or smoke while using the material. Emergency showers should be readily available. Material may partially freeze in cold temperatures which will result in crystals and haziness. If this occurs rewarm and homogenize. Avoid contact with skin eyes. Vapors may irritate eyes and will irritate the skin. Use only with good ventilation and PPE. Keep container closed when not in use.

7.3 Specific end use(s): No information

8 Exposure controls/personal protection

Additional information about design of technical facilities:

Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above. Use local exhaust ventilation to control airborne vapor. Ensure eyewash/safety shower stations are available near areas where this product is used.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

Currently, International exposure limits are not established for the components of this product. Please check with competent authority in each country for the most recent limits in place.

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

Respiratory protection: Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

Protection of hands: Use chemical resistant gloves to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.



Protective gloves

Material of gloves:

The selection of suitable gloves does not only depend on the material, but also on the quality, and varies from manufacturer to manufacturer.

Penetration time of glove material:

The exact break through time has to be determined by the manufacturer of the protective gloves. DO NOT exceed the breakthrough time set by the Manufacturer.

Eye protection: Safety glasses or chemical goggles as appropriate to prevent eye contact. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.



Tightly sealed goggles

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/22/2014

Revision: 10/22/2014

Trade Name: E100-VB5™ - Epoxy Vapor Barrier – Part A

Body Protection:

Use body protection appropriate to prevent contact (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form:

Liquid

Color:

Water – clear to slight amber

Odor:

Mild epoxy odor

Odor threshold:

Not Available

pH-value:

Not Available

Change in condition

Melting point/Melting range:

No data available

Boiling point/Boiling range:

>200°C

Flash point:

>392°F (>200°C)

Flammability (solid, gaseous):

No data available

Auto/Self-ignition temperature:

Not established

Decomposition temperature:

No data available

Self-igniting:

No data available

Danger of explosion:

This product is a flammable liquid above flash point shown above.

Explosion limits

Lower:

Not established

Upper:

Not established

Vapor pressure at 25 °C:

<0.1 mmHg

Density at 20°C:

9.13 lbs. per gallon, specific gravity 1.10

Relative density:

No data available

Vapor density:

No data available

Evaporation rate:

No data available

Solubility in / Miscibility with Water:

Not Available

Specific Gravity 20°C: (Water = 1):

Not Available

Viscosity:

Dynamic:

No data available

Kinematic:

No data available

Solvent content:

Organic solvents:

No data available

VOC (EC)

No data available

9.2 Other information

No data available

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/22/2014

Revision: 10/22/2014

Trade Name: E100-VB5™ - Epoxy Vapor Barrier – Part A

10 Stability and reactivity

10.1 Reactivity

10.2 Chemical stability: Product is stable

Thermal decomposition / conditions to be avoided: When heated to decomposition this product produces noxious gases such as CO, CO₂, hydrocarbons and soot.

10.3 Possibility of hazardous reactions: No data available

10.4 Conditions to avoid: Contact with incompatible materials

10.5 Incompatible materials: Oxidizing agents and amines should be avoided as these will cause exothermic polymerization. Avoid extreme heat

10.6 Hazardous decomposition products: Will not occur

11 Toxicological information

11.1 Information on toxicological effects: Toxicity data is available for this product

Acute toxicity:

Acute Dermal	LD 50	>20,000 mg/kg	Rabbit
Acute Oral	LD 50	>5,000 mg/kg	Rat

Primary irritant effect: Contact with this product can be irritating to exposed skin and eyes.

Sensitization: This product is considered a skin sensitizer.

Additional toxicological information:

None of the ingredients are found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, IARC and therefore is not considered to be, nor suspected to be a cancer-causing agent by these agencies.

Reproductive toxicity information:

No information concerning the effects of this product and its components on the human reproduction system.

12 Ecological information

12.1 Toxicity

Aquatic toxicity: No evidence is currently available on this product's effects on aquatic life.

Component Data: CAS# 25085-99-8

Fathead Minnow LC50 3 mg/l 96 h

Toxicity to daphnia magna EC50 1.4 -1.7 mg/l 24 h

Bacteria: IC50 >42.6 mg/l 18 h

Biodegradation: 28 days 12% OECD

Bioaccumulation: Not readily biodegradable

12.2 Persistence and degradability: No data available

12.3 Bio accumulative potential: No data available

12.4 Mobility in soil: No evidence is currently available on this product's effects on plants or animals.

Ecotoxicological effects:

Remark:

Additional ecological information: No data available

General notes: No specific data is available for this product, however this product is expected to be readily biodegradable

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/22/2014

Revision: 10/22/2014

Trade Name: E100-VB5™ - Epoxy Vapor Barrier – Part A

13 Disposal considerations

13.1 Waste treatment methods

Recommendations:

Waste disposal must be in accordance with appropriate Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

RCRA WASTE CODE: None Listed

EU WASTE CODE: Not Listed

14 Transport information

14.1 UN-Number

DOT:CAN: NOT REGULATED

ADN; ADR: IMDG: IATA: UN 3082

14.2 UN proper shipping name

DOT:CAN; NOT REGULATED

ADR: ADN: IMDG: IATA: Environmentally hazardous substance Liquid, N.O.S.
(Bisphenol A, epoxy resin)

14.3 Transport hazard class(es)

DOT; CAN:



ADN: ADR: IMDG: IATA



14.4 Packing group

DOT:CAN: NOT REGULATED

ADR: ADN: IMDG: IATA: PG III

14.5 Environmental hazards:

Product contains environmentally hazardous substances: reaction Products of Epichlorohydrin and Bisphenol A)

Marine pollutant:

YES

Special Markings (ADR):



Notes: marine pollutant (IMDG code 2.9.3). For air transport, see special provision A97 (ICAO/IATA).
For surface shipments in the USA: Not Regulated

14.6 Special precautions for user

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/22/2014

Revision: 10/22/2014

Trade Name: E100-VB5™ - Epoxy Vapor Barrier – Part A

Danger code (Kemler):	No data available
EMS Number:	No data available
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:	No data available
Transport/Additional information	
ADR	
Tunnel restriction code	No data available
UN "Model Regulation":	No data available

15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture. United States (USA)

SARA: This product is not subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act.: None

Section 355 (extremely hazardous substances): None of the ingredients are listed.

Section 313 (Toxic Release Inventory): None of the ingredients are listed.

TSCA (Toxic Substances Control Act): All ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients is listed.

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed

Canadian Ingredient Disclosure list (limit 0.1%):

None of the ingredients are listed.

Canadian Ingredient Disclosure list (limit 1%):

None of the ingredients are listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/22/2014

Revision: 10/22/2014

Trade Name: E100-VB5™ - Epoxy Vapor Barrier – Part A

16 Other information

Relevant phrases:

- H312: Harmful in contact with skin
- H317: May cause an allergic skin reaction
- H412: Harmful to aquatic life with long lasting effects

Precautionary statements

- P264: Wash hands thoroughly after handling
- P270: Do not eat, drink or smoke when using this product
- P271: Use only in well-ventilated area.
- P273: Avoid release to the environment
- P280: Wear protective gloves/protective clothing/eye protection/face protection
- P337+P313: If eye irritation persists: Get medical advice/attention.
- P370+P378: In case of fire: Use for extinction: CO2, powder or water spray.
- P302+P352: IF ON SKIN: Wash with plenty of soap and water.
- P391: Collect spillage.
- P403+P235: Store in a well-ventilated place. Keep cool.
- P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

-
- R21: Harmful in contact with skin
 - R34: Causes burns.
 - R43: May cause sensitization by skin contact
 - R52/53: Harmful to aquatic organisms may cause long-term adverse effects in the aquatic environment.

Abbreviations and acronyms:

- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation.
- IATA: International Air Transport Association.
- ACGIH: American Conference of Governmental Industrial Hygienists.
- EINECS: European Inventory of Existing Commercial Chemical Substances.
- ELINCS: European List of Notified Chemical Substances.
- CAS: Chemical Abstracts Service (division of the American Chemical Society).
- NFPA: National Fire Protection Association (USA).
- HMIS: Hazardous Materials Identification System (USA).
- LC50: Lethal concentration, 50 percent.
- LD50: Lethal dose, 50 percent.

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/28/2014

Revision: 10/28/2014

Trade Name: AUS-V™ - Aliphatic Urethane Coating – Part A

1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade Name: AUS-V™ - Part A

1.2 Article No.: AUS-V™ - Part A

1.3 Details of the supplier of the Safety Data Sheet Manufacturer:

Elite Crete Systems
1061 Transport Drive
Valparaiso, IN 46383
Toll Free: 888.323.4445
Tel: (219) 465-7671
Fax: (219) 531-0898
www.elitecrete.com

1.4 Emergency telephone number:

CHEMTREC US DOMESTIC: (800-424-9300)
CHEMTREC INTERNATIONAL: (703-527-3887)

2 Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 and GHS:

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H361fd, H411.

The following Hazard Statements are applicable only according to OSHA regulations within the United States. These Statements are not applicable for the CLP regulation (1272/2008/EC) in the EU: H361.



GHS07 exclamation mark

Acute Tox. 2; H302: Harmful if swallowed.

Skin Sensitization 1; H317: May cause an allergic skin reaction. STOT SE 3; H335: May cause respiratory irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC:

Xn; Harmful. R22-62: Harmful if swallowed. Possible risk of impaired fertility. Xi; Sensitizing.

Xi; Irritant.. R22-48: Harmful if swallowed.

Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

2.2 Label elements

Labeling according to Regulation (EC) No 1272/2008:

Hazard pictograms:



GHS07

Signal Word: Warning

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/28/2014

Revision: 10/28/2014

Trade Name: AUS-V™ - Aliphatic Urethane Coating – Part A

Hazard-determining components of labelling:

N/A

Hazard statements

H312: Harmful in contact with skin

Precautionary statements

P264: Wash hands thoroughly after handling

P270: Do not eat, drink or smoke when using this product

P271: Use only in well ventilated area.

P273: Avoid release to the environment

P280: Wear protective gloves/protective clothing/eye protection/face protection

P337+P313: If eye irritation persists: Get medical advice/attention.

P370+P378: In case of fire: Use for extinction: CO2, powder or water spray.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P391: Collect spillage.

P403+P235: Store in a well-ventilated place. Keep cool.

P501: Dispose of contents/container in accordance with local/regional/national/international regulations

2.3 Other hazards

Results of PBT and vPvB assessment:

PBT: Not applicable.

vPvB: Not applicable.

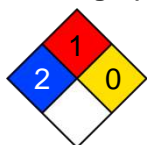
Hazard description:

Canadian WHMIS Classification: This product is categorized as a Class D Division 2B Materials causing other toxic effects, as per the Controlled Product Regulations

WHMIS-symbols:



NFPA ratings (scale 0 - 4)



Health = 2
Fire = 1
Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health	2
Fire	1
Reactivity	0

Health = 2
Fire = 1
Reactivity = 0

2.3 Other hazards

No known

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/28/2014

Revision: 10/28/2014

Trade Name: AUS-V™ - Aliphatic Urethane Coating – Part A

3 Composition/information on ingredients

3.2 Mixture.

Description: Mixture of substances listed below with nonhazardous additives.

Hazardous components:

Identification #	Description	WT. %
CAS: 5131-66-8 EINECS: Not Listed Index Number:	Propylene glycol n-Butyl ether HAZARD CLASSIFICATION: [Xn] Harmful, [Xi] Irritant RISK PHRASES: R21, R34, R43, R52/53	< 95-99%
CAS: 102-71-6	Triethanolamine Skin Irritant 1, Skin Sens. 1, Muta. 2; Aquatic Chronic 2; R 43; Xi 38; R 38, R43.	< 5%

Additional information: Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).

4 First aid measures

4.1 Description of first aid measures

After inhalation:

If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention if breathing difficulty continues.

After skin contact:

Wash skin thoroughly after handling. Seek medical attention if irritation develops and persists. Remove contaminated clothing. Launder contaminated clothing before re-use.

After eye contact:

If product enters the eyes, open eyes while under gentle running water for at least 15 minutes. Seek medical attention.

After swallowing:

If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or MSDS with the victim to the health professional.

4.2 Most important symptoms and effects, both acute and delayed.

Acute: This material may cause irritation to skin and eyes. Product may cause an allergic skin reaction.

Chronic: Prolonged or repeated skin contact may cause allergic skin reaction or dermatitis.

Target Organs: **Acute:** Eye, Skin **Chronic:** Skin

Hazards: Pre-existing skin or eye problems may be aggravated by exposure to this product.

4.3 Indication of any immediate medical attention and special treatment needed:

Treat symptoms and reduce over-exposure.

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/28/2014

Revision: 10/28/2014

Trade Name: AUS-V™ - Aliphatic Urethane Coating – Part A

5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: Carbon dioxide, foam, dry chemical, halon, water spray, sand, limestone powder.

5.2 Special hazards arising from the substance or mixture: This product is a flammable liquid above flash point shown.

5.3 Advice for firefighters: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures: Personnel should be trained for spill response operations.

6.2 Environmental precautions: All work practices must be aimed at eliminating environmental contamination.

6.3 Methods and material for containment and cleaning up: Evacuate area. Contain spill if safe to do so. Prevent entry into drains, sewers, and other waterways. Soak up spilled material with an absorbent material and pick up and place in an appropriate waste container for disposal. Do not mix with other wastes. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations).

7 Handling and storage

7.1 Precautions for safe handling

As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapors/mists generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:

Store between 10 and 50 °C (45 -125 °F) and avoid contact with skin and eyes. Do not store near acids or amines. Ground all transfer equipment. Good general housekeeping procedure should be followed. Do not eat drink or smoke while using the material. Emergency showers should be readily available. Material may partially freeze in cold temperatures which will result in crystals and haziness. If this occurs rewarm and homogenize. Avoid contact with skin eyes. Vapors may irritate eyes and will irritate the skin. Use only with good ventilation and PPE. Keep container closed when not in use.

7.3 Specific end use(s): No information

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/28/2014

Revision: 10/28/2014

Trade Name: AUS-V™ - Aliphatic Urethane Coating – Part A

8 Exposure controls/personal protection

Additional information about design of technical facilities:

Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above.
Use local exhaust ventilation to control airborne vapor. Ensure eyewash/safety shower stations are available near areas where this product is used.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

Currently, International exposure limits are not established for the components of this product. Please check with competent authority in each country for the most recent limits in place.

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

Respiratory protection: Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

Protection of hands: Use chemical resistant gloves to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.



Protective gloves

Material of gloves:

The selection of suitable gloves does not only depend on the material, but also on the quality, and varies from manufacturer to manufacturer.

Penetration time of glove material:

The exact break through time has to be determined by the manufacturer of the protective gloves. DO NOT exceed the breakthrough time set by the Manufacturer.

Eye protection: Safety glasses or chemical goggles as appropriate to prevent eye contact. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.



Tightly sealed goggles

Body Protection:

Use body protection appropriate to prevent contact (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards.

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/28/2014

Revision: 10/28/2014

Trade Name: AUS-V™ - Aliphatic Urethane Coating – Part A

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form:	Liquid
Color:	Clear
Odor:	Mild
Odor threshold:	Not Available

pH-value:	Not Available
Change in condition	
Melting point/Melting range:	No data available
Boiling point/Boiling range:	>200°C
Flash point:	>392°F (>200°C)
Flammability (solid, gaseous):	No data available
Auto/Self-ignition temperature:	Not established
Decomposition temperature:	No data available
Self-igniting:	No data available
Danger of explosion:	This product is a flammable liquid above flash point shown above.
Explosion limits	
Lower:	Not established
Upper:	Not established
Vapor pressure at 25 °C:	<0.1 mmHg
Density at 20°C:	8.64 lbs. per gallon, specific gravity 1.03
Relative density:	No data available
Vapor density:	No data available
Evaporation rate:	No data available
Solubility in / Miscibility with Water:	Not Available
Specific Gravity 20oC: (Water = 1):	Not Available
Viscosity:	
Dynamic:	No data available
Kinematic:	No data available
Solvent content:	
Organic solvents:	No data available
VOC (EC)	No data available
9.2 Other information	No data available

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/28/2014

Revision: 10/28/2014

Trade Name: AUS-V™ - Aliphatic Urethane Coating – Part A

10 Stability and reactivity

10.1 Reactivity

10.2 Chemical stability: Product is stable

Thermal decomposition / conditions to be avoided: When heated to decomposition this product produces noxious gases such as CO, CO₂, hydrocarbons and soot.

10.3 Possibility of hazardous reactions: No data available

10.4 Conditions to avoid: Contact with incompatible materials

10.5 Incompatible materials: Oxidizing agents and amines should be avoided as these will cause exothermic polymerization. Avoid extreme heat

10.6 Hazardous decomposition products: Will not occur

11 Toxicological information

11.1 Information on toxicological effects: Toxicity data is available for this product

Acute toxicity:

Acute Dermal	LD 50	>20,000 mg/kg	Rabbit
Acute Oral	LD 50	>5,000 mg/kg	Rat

Primary irritant effect: Contact with this product can be irritating to exposed skin and eyes.

Sensitization: This product is considered a skin sensitizer.

Additional toxicological information:

None of the ingredients are found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, IARC and therefore is not considered to be, nor suspected to be a cancer-causing agent by these agencies.

Reproductive toxicity information:

No information concerning the effects of this product and its components on the human reproduction system.

12 Ecological information

12.1 Toxicity

Aquatic toxicity: No evidence is currently available on this product's effects on aquatic life.

12.2 Persistence and degradability: No data available

12.3 Bio accumulative potential: No data available

12.4 Mobility in soil: No evidence is currently available on this product's effects on plants or animals.

Ecotoxicological effects:

Remark:

Additional ecological information: No data available

General notes: No specific data is available for this product, however this product is expected to be readily biodegradable

13 Disposal considerations

13.1 Waste treatment methods

Recommendations:

Waste disposal must be in accordance with appropriate Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

RCRA WASTE CODE: None Listed

EU WASTE CODE: Not Listed

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/28/2014

Revision: 10/28/2014

Trade Name: AUS-V™ - Aliphatic Urethane Coating – Part A

14 Transport information

14.1 UN-Number

DOT: CAN: NOT REGULATED

ADN: ADR: IMDG: IATA: NOT REGULATED

14.2 UN proper shipping name

DOT: CAN: NOT REGULATED

ADN: ADR: IMDG: IATA: NOT REGULATED

14.3 Transport hazard class(es)

DOT: CAN: NOT REGULATED

ADR: ADN: IMDG: IATA NOT REGULATED

14.4 Packing group

DOT: CAN: NOT REGULATED

ADN: ADR: IMDG :IATA NOT REGULATED

14.5 Environmental hazards

N/A

Marine Pollutant: NOT REGULATED

Special Marking (ADR):
For surface shipments within the USA Not Regulated.

14.6 Special precautions for user

Danger code (Kemler): NOT APPLICABLE
EMS Number:

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:

NOT APPLICABLE

Transport/Additional information

ADR

Tunnel restriction code NOT APPLICABLE

UN "Model Regulation": NOT APPLICABLE

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 10/28/2014

Revision: 10/28/2014

Trade Name: AUS-V™ - Aliphatic Urethane Coating – Part A

15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture. United States (USA)

SARA: This product is not subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act.: None

Section 355 (extremely hazardous substances): None of the ingredients are listed.

Section 313 (Toxic Release Inventory): None of the ingredients are listed.

TSCA (Toxic Substances Control Act): All ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients is listed.

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed

Canadian Ingredient Disclosure list (limit 0.1%):

None of the ingredients are listed.

Canadian Ingredient Disclosure list (limit 1%):

None of the ingredients are listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases:

Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation.
 IATA: International Air Transport Association.
 ACGIH: American Conference of Governmental Industrial Hygienists.
 EINECS: European Inventory of Existing Commercial Chemical Substances.
 ELINCS: European List of Notified Chemical Substances.
 CAS: Chemical Abstracts Service (division of the American Chemical Society).
 NFPA: National Fire Protection Association (USA).
 HMIS: Hazardous Materials Identification System (USA).
 LC50: Lethal concentration, 50 percent.
 LD50: Lethal dose, 50 percent.

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 12/30/2014

Revision: 12/30/2014

Trade Name: AUS-V™ - Aliphatic Urethane Coating - Part B

1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade Name: AUS-V™ - Part B

1.2 Article No.: AUS-V™ - PART B

1.3 Details of the supplier of the Safety Data Sheet Manufacturer:

Elite Crete Systems
1061 Transport Drive
Valparaiso, IN 46383
Toll Free: 888.323.4445
Tel: (219) 465-7671
Fax: (219) 531-0898
www.elitecrete.com

1.4 Emergency telephone number:

CHEMTREC US DOMESTIC: (800-424-9300)
CHEMTREC INTERNATIONAL: (703-527-3887)

2 Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 and GHS:

Acute Tox: 4 H332 Harmful if inhaled.
Skin Sens: 1 H317 May cause an allergic skin reaction.
STOT SE: 3 H335 May cause respiratory irritation.

Classification according to Directive 1999/45/EC:

Xn; Harmful
R20: Harmful if inhaled.
Xi; Irritant
R37: Irritating to respiratory system
Xi; Sensitizing
R43: may cause sensitization by skin contact.

Information concerning particular hazards for human and environment:

Product Description: This product is a water –white – pale straw colored liquid with a mild odor.

Health Hazards: Mild to moderate eye, skin and respiratory system irritant. Harmful if swallowed. May cause skin sensitization

Flammability Hazards: This product is Flammable above its flash point of 320°F (160°C)

Reactivity Hazards: None known.

Environmental Hazards: The environmental effects of this product have not been investigated; however it is not expected to cause significant adverse effects.

Emergency Considerations: Emergency responders must wear the proper personal protective equipment (and have appropriate fire-suppression equipment) suitable for the situation to which they are responding.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 12/30/2014

Revision: 12/30/2014

Trade Name: AUS-V™ - Aliphatic Urethane Coating - Part B

2.2 Label elements

Labeling according to Regulation (EC) No 1272/2008:

Hazard pictograms:



GHS07

Signal Word: Warning

Hazard-determining components of labeling:

Hexamethylene di-isocyanate oligomers, isocyanurate

Hexamethylene-di-isocyanate

Hazard statements

H332: Harmful if inhaled

H317: May cause an allergic skin reaction

H335: may cause respiratory irritation

Precautionary statements

P260: Do not breath dust/fume/gas/mist/vapors/spray.

P264: Wash hands thoroughly after handling

P280: Wear protective gloves/protective clothing/eye protection/face protection

P285: in case of inadequate ventilation wear respiratory protection.

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for Breathing.

P333+P313: If skin irritation or rash occurs: Get medical advice/attention.

P370+P378: In case of fire: Use for extinction: CO2, powder or water spray.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P391: Collect spillage.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards:

Combustible liquid.

May cause eye irritation.

On contact with water carbon monoxide is released.

Results on PBT and vPvB assessment:

PBT: no

vPvB: no

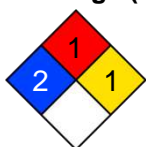
Hazard description:

Canadian WHMIS Classification: This product is categorized as a Class D Division 2B Materials causing other toxic effects, as per the Controlled Product Regulations

WHMIS-symbols:



NFPA ratings (scale 0 - 4)



Health = 2

Fire = 1

Reactivity = 1

HMIS-ratings (scale 0 - 4)

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 12/30/2014

Revision: 12/30/2014

Trade Name: AUS-V™ - Aliphatic Urethane Coating - Part B

Health	2
Fire	1
Reactivity	1

Health = 2
Fire = 1
Reactivity = 1

2.3 Other hazards

No known

3 Composition/information on ingredients

3.2 Mixture.

Description: Mixture of substances listed below with nonhazardous additives.

Hazardous components:

Identification #	Description	WT. %
CAS: 28182-81-2 EINECS: 931-274-8 Reg. Number: 01-2119485796-17-0002	Hexamethylene diisocyanate oligomers, Isocyanurate HAZARD CLASSIFICATION: Xn R20, Xi R37, R43 Acute tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H##%	99.6%
CAS: 822-06-0 EINECS 212-485-8 Reg. Number; 01-2119457571-37-0001	Hexamethylene-di-isocyanate HAZARD CLASSIFICATION: T R23, Xn R42/43; Xi R36/37/38 Acute tox. 1, H330; Resp. Sens. 1, H334; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	< 0.5%

Additional information: Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).

4 First aid measures

4.1 Description of first aid measures

After inhalation:

If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention if breathing difficulty continues.

After skin contact:

Wash skin thoroughly after handling. Seek medical attention if irritation develops and persists. Remove contaminated clothing. Launder contaminated clothing before re-use.

After eye contact:

If product enters the eyes, open eyes while under gentle running water for at least 15 minutes. Seek medical attention.

After swallowing:

If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or MSDS with the victim to the health professional.

4.2 Most important symptoms and effects, both acute and delayed.

No further relevant information available.

Hazards: Pre-existing skin or eye problems may be aggravated by exposure to this product.

4.3 Indication of any immediate medical attention and special treatment needed:

Treat symptoms and reduce over-exposure. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Treat symptomatically. No specific antidote available.

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 12/30/2014

Revision: 12/30/2014

Trade Name: AUS-V™ - Aliphatic Urethane Coating - Part B

5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: Carbon dioxide, foam, dry chemical, halon, water spray, sand, limestone powder.

5.2 Special hazards arising from the substance or mixture: Combustible. During combustion toxic vapors are released.

5.3 Advice for firefighters: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures: Personnel should be trained for spill response operations. Wear full protective clothing, self contained breathing apparatus, gloves and boots. Do not approach downwind without self contained breathing mask. (NIOSH approved).

6.2 Environmental precautions: All work practices must be aimed at eliminating environmental contamination.

6.3 Methods and material for containment and cleaning up: Evacuate area. Contain spill if safe to do so. Prevent entry into drains, sewers, and other waterways. Soak up spilled material with an absorbent material and pick up and place in an appropriate waste container for disposal. Do not mix with other wastes. Dispose of in accordance with applicable Federal, State, and local procedures (see Sections 7, 8, 13, for further cautions, clean up and Disposal Considerations).

7 Handling and storage

7.1 Precautions for safe handling

As with all chemicals, avoid getting this product ON YOU or IN YOU. provide good ventilation. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapors/mists generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:

Store in a cool dry place with a floor coated or lined for watertight basin. Avoid direct contact with skin and eyes. Do not store near acids or amines. Good general housekeeping procedure should be followed. Do not eat drink or smoke while using the material. Emergency showers should be readily available... Avoid contact with skin eyes. Vapors may irritate eyes and will irritate the skin. Use only with good ventilation and PPE. Keep container closed when not in use.

7.3 Specific end use(s): No information

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 12/30/2014

Revision: 12/30/2014

Trade Name: AUS-V™ - Aliphatic Urethane Coating - Part B

8 Exposure controls/personal protection

The recommendations in this section should not be a substitute for a personal protective equipment (PPE) assessment performed by the employer as required by 29 CFR 1910 Subpart I.

Exposure Limits

Homopolymer of Hexamethylene Diisocyanate (28182-81-2)

AUS-V Part B Exposure Limit

Time weighted average 0.5 mg/m³

AUS-V Part B Exposure Limit

Short Term Exposure Limit (STEL): 1.0 mg/m³ (15-min)

Hexamethylene-1,6-Diisocyanate (822-06-0)

US. ACGIH Threshold Limit Values

Time weighted average 0.005 ppm

Any component which is listed in section 3 and is not listed in this section does not have a known ACGIH TLV, OSHA PEL or supplier recommended occupational exposure limit.

Additional information about design of technical facilities:

Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above.

Use local exhaust ventilation to control airborne vapor. Ensure eyewash/safety shower stations are available near areas where this product is used.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

Currently, International exposure limits are not established for the components of this product. Please check with competent authority in each country for the most recent limits in place.

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

Respiratory protection: Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

Protection of hands: Use chemical resistant gloves to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.



Protective gloves

Material of gloves:

The selection of suitable gloves does not only depend on the material, but also on the quality, and varies from manufacturer to manufacturer.

Penetration time of glove material:

The exact break through time has to be determined by the manufacturer of the protective gloves. DO NOT exceed the breakthrough time set by the Manufacturer.

Eye protection: Safety glasses or chemical goggles as appropriate to prevent eye contact. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.



Tightly sealed goggles

Body Protection:

Use body protection appropriate to prevent contact (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards.

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 12/30/2014

Revision: 12/30/2014

Trade Name: AUS-V™ - Aliphatic Urethane Coating - Part B

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form:

Liquid

Color:

Colorless to pale yellow

Odor:

none

Odor threshold:

Not Available

pH-value:	Not Applicable (reacts with Water)
Boiling point/Boiling range:	Decomposition
Flash point:	>365°F (>185°C) (IN EN 22719)
Auto/Self-ignition temperature:	833°F (445°C) (DIN 51794)
Decomposition temperature:	357.8°F (181°C)
Explosion limits oxidizing properties	Not established (Not oxidizing) Not established (Not oxidizing)
Vapor pressure at 68°F (20 °C):	HDI Polyisocyanate: 5.2 X 10-9 mm/Hg
Density at 73°F (23°C):	9.65 lbs. per gallon, specific gravity 1.16 g/cm ³
Bulk density:	Approximately 1,150 kg/m ³
Solubility in / Miscibility with Water:	Reacts slowly to liberate CO ₂ gas.
Viscosity:	
Dynamic:	800 mPa.s (cps) @68°F (20°C)
Solvent content:	
Organic solvents:	
VOC (EC)	0.00
9.2 Other information	No further relevant information available

10 Stability and reactivity

10.1 Reactivity

10.2 Chemical stability: Product is stable at humanly acceptable environment temperature

Thermal decomposition / conditions to be avoided: When heated to decomposition this product produces noxious gases such as CO, CO₂, hydrocarbons and soot.

10.3 Possibility of hazardous reactions: reacts with water, aqueous solutions and alcohols, amines, bases, protic solvents with a great release of CO₂, and hence a risk of a pressure build up in confined areas, and forms an insoluble solid presipate.

10.4 Conditions to avoid: Contact with incompatible materials above

10.5 Incompatible materials: no further relevant information available than has been provided here.

10.6 Hazardous decomposition products: On thermal decomposition (pyrolysis) releases: toxic gases, Carbon dioxide,

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 12/30/2014

Revision: 12/30/2014

Trade Name: AUS-V™ - Aliphatic Urethane Coating - Part B

11 Toxicological information

11.1 Information on toxicological effects:

Acute toxicity:

LD/LC50 values:

28182-81-2 Hexamethylene diisocyanate oligomers, Isocyanurate

Oral LD0 > 2500 mg/kg (rat) (OECD 423 (female))

Dermal LD0 > 2000 mg/kg (rabbit) (OECD 402)

> 2000 mg/kg (rat) OECD 402)

Inhalative LC50/4h 0.390 mg/l (rat) (OECD 403)

822-06-0 hexamethylene-di-isocyanate

Oral LD50 746 mg/kg (rat) (OECD 401)

Dermal LD50 > 7000 mg/kg (rat) (OECD 402)

Inhalative LC50/4h 0.124 mg/l (rat) (OECD 403)

Primary irritant effect: Not classified as irritating to skin or eyes according to OECD 404, 405

Inhalation: May cause respiratory irritation. Source; Unpublished reports.

28182-81-2 Hexamethylene diisocyanate oligomers, Isocyanurate

Inhalative NOAEC/ 6h 3mg/m³ (rat) (OECD TG 403) (TRGS)

Sensitization:

May cause sensitization on contact with skin.

(OECD 429) (mouse)

Is Not considered as an respiratory sensitizer (Guinea-pig)

Human data available. Unpublished reports.

Repeated dose toxicity:

Is Not considered health hazardous by prolonged or repeated exposure. (Unpublished reports)

28182-81-2 Hexamethylene diisocyanate oligomers, Isocyanurate

Inhalative NOEC 3.3mg/m³ (rat) (OECD 413)

822-06-0 hexamethylene-di-isocyanate

Inhalative NOAEC Tox Repeat 0.005 ppm (rat) (OECD 453)

Carcinogenicity:

Animal studies have not shown any carcinogenic potential.

822-06-0 hexamethylene-di-isocyanate

Inhalative NOAEC Carc 0.164 ppm (rat) (OECD 453)

Mutagenicity:

Chromosomal aberrations (OECD 473, V79 cells):

Negative

Unpublished reports

Reproductive toxicity:

This product is Not considered hazardous to the reproduction.

(Internal evaluation)

822-06-0 hexamethylene-di-isocyanate

Inhalative NOAEC Dvlp/Tera Tox 0.3ppm (rat) (OECD 414)

NOAEC Material Tox 0.005 ppm (rat) (OECD 414)

NOAEC Fert 0.3 ppm (rat) (OECD 422)

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 12/30/2014

Revision: 12/30/2014

Trade Name: AUS-V™ - Aliphatic Urethane Coating - Part B

12 Ecological information

12.1 Toxicity

Aquatic toxicity: No evidence is currently available on this product's effects on aquatic life. Source unpublished reports.

28182-81-2 Hexamethylene diisocyanate oligomers, Isocyanurate

EC10/72h (static) 370 mg/l (Desmodesmus subspicatus) (EU C.3)
 EL/50?48h (static) 127 mg/l (Daphnia magna) (EU C.2)
 ErC50(0-72h) (static) 1000 mg/l (Desmodesmus subspicatus) (EU C.3)
 LL0/96h \geq 82.8 mg/l (Brachydanio rerio) EU C.1)

822-06-0 hexamethylene-di-isocyanate

EC0/48h (static) \geq 89.1 mg/l (Daphnia magna) (EU C.2)
 ErC50(0-72h) (static) $>$ 77.4 mg/l (Desmodesmus subspicatus) EU C.3)
 LC0/96h (static) \geq 82.8 mg/l (Brachydanio rerio) EU C.1)
 NOEC/72h (static) 11.7 mg/l (Desmodesmus Subspicatus) (EU C.3)

12.2 Persistence and degradability:

Not biodegradable

28182-81-2 Hexamethylene diisocyanate oligomers, Isocyanurate

BOD28 1% (bacteria) ((EU C.4-E) (Unpublished report)
 DT50 3h (photolysis) ((79°F, 25°C) (AOPWIN v1.92)
 .7h (hydrolysis) ((73°F, 23°C) (ASTM D 4666(internal evaluation)

822-06-0 hexamethylene-di-isocyanate

BOD28 42% (bacteria) ((EU C.4-E)
 DT50 79°F, 25°C, 48.44 h (Photolysis) (AOPWIN v1.92)
 73°F, 23°C 0.23 h (Hydrolysis) (ASTN 4666)

Other information:

Reacts with:

-water and forms insoluble solid precipitate.

12.3 Bio accumulative potential:

Log Pow, see section 9.

Not bioaccumulable

(internal evaluation)

28182-81-2 Hexamethylene diisocyanate oligomers, Isocyanurate

BCF 3.2 (fish) (BCFWIN v.217)

822-06-0 hexamethylene-di-isocyanate

BCF 58 (fish) BCFWIN v2.17)

12.4 Mobility in soil:.

28182-81-2 Hexamethylene diisocyanate oligomers, Isocyanurate

Log Koc 7.8 (.) (PCKOCv1.66)

822-06-0 hexamethylene-di-isocyanate

Log Koc 5861 (.) (PCKOCv.166)

Other information: Formation of insoluble polyuria

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 12/30/2014

Revision: 12/30/2014

Trade Name: AUS-V™ - Aliphatic Urethane Coating - Part B

Ecological effects:

Behavior in sewerage processing plants.

28182-81-2 Hexamethylene diisocyanate oligomers, Isocyanurate

EC50/3h (static) (3828mg/l (bacteria) (OECD 209)

822-06-0 hexamethylene-di-isocyanate

EC50/3h (static) (842mg/l (bacteria) (OECD 209)

Additional ecological information;

General notes: Not classified as Dangerous for the environment

12.5 Results of PBT and vPvB assessment

PBT: no

vPvB: no

12.6 Other adverse effects: No further relevant information available

13 Disposal considerations

13.1 Waste treatment methods

Recommendations:

Neutralize with a mixture of ammonia solution (190 gm/l), water and ethanol (5%, 50% AND 45%)

Incinerate at a licensed installation in the EU. Disposal in USA waste disposal must be in accordance with appropriate Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

RCRA WASTE CODE: None Listed

EU WASTE CODE: 08-05-01

Un-cleaned packaging recommendation:

Allow container to drain thoroughly. Incinerate drums and containers at an approved licensed facility follow all local and federal laws and requirements. This is only a recommendation in lieu of direction.

14 Transport information

14.1 UN-Number

DOT: Canada TGD

not regulated

ADR, IMDG, IATA:

Not restricted (Non regulated)

14.2 UN proper shipping name

DOT: Canada TGD

NOT RESTRICTED NOT REGULATED

ADR, IMDG, IATA:

NOT Restricted (non regulated)

14.3 Transport hazard class(es)

DOT & Canada TGD



ADR, IMDG, IATA



Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 12/30/2014

Revision: 12/30/2014

Trade Name: AUS-V™ - Aliphatic Urethane Coating - Part B

14.4 Packing group

DOT, Canada TGD not regulated

14.5 Environmental hazards:

Marine pollutant: This products ingredients are not classified by the DOT as a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B)

14.6 Special precautions for user

Danger code (Kemler): No data available

EMS Number: No data available

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:

No data available

Transport/Additional information

When individual containers are less than 33,332 lbs (15119 kg)
This material ships as non regulated

ADR

Tunnel restriction code No data available

UN "Model Regulation":

No data available

15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture. United States (USA)

SARA: This product is not subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act.: None

Section 355 (extremely hazardous substances): None of the ingredients are listed.

Section 313 (Toxic Release Inventory): None of the ingredients are listed.

TSCA (Toxic Substances Control Act): All ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients is listed.

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed

Canadian Ingredient Disclosure list (limit 0.1%):

None of the ingredients are listed.

Canadian Ingredient Disclosure list (limit 1%):

None of the ingredients are listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 12/30/2014

Revision: 12/30/2014

Trade Name: AUS-V™ - Aliphatic Urethane Coating - Part B

16 Other information

Relevant phrases:

H312: Harmful in contact with skin

H317: May cause an allergic skin reaction

Precautionary statements

P260: Do not breathe dust/fume/gas/mist/vapors/spray.

P264: Wash hands thoroughly after handling

P280: Wear protective gloves/protective clothing/eye protection/face protection

P285: in case of inadequate ventilation wear respiratory protection.

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for Breathing.

P333+P313: If skin irritation or rash occurs: Get medical advice/attention.

P370+P378: In case of fire: Use for extinction: CO₂, powder or water spray.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P391: Collect spillage.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

R34: Causes burns.

R43: May cause sensitization by skin contact

Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation.

IATA: International Air Transport Association.

ACGIH: American Conference of Governmental Industrial Hygienists.

EINECS: European Inventory of Existing Commercial Chemical Substances.

ELINCS: European List of Notified Chemical Substances.

CAS: Chemical Abstracts Service (division of the American Chemical Society).

NFPA: National Fire Protection Association (USA).

HMIS: Hazardous Materials Identification System (USA).

LC50: Lethal concentration, 50 percent.

LD50: Lethal dose, 50 percent.

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 12/10/2014

Revision: 12/10/2014

Trade Name: E100-VB5™ - Epoxy Vapor Barrier – Part B

1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade Name: E100-VB5™ Part B

1.2 Article No.: E100-VB5™ Part B

1.3 Details of the supplier of the Safety Data Sheet Manufacturer:

Elite Crete Systems
1061 Transport Drive,
Valparaiso, IN 46383
Toll Free: 888.323.4445
Tel: (219) 465-7671
Fax: (219) 531-0898
www.elitecrete.com

1.4 Emergency telephone number:

CHEMTREC US DOMESTIC: (800-424-9300)
CHEMTREC INTERNATIONAL: (703-527-3887)

2 Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 and GHS:

Acute Oral Toxicity Category 4
Serious eye damage category 1

2.2 Label elements

Labeling according to Regulation (EC) No 1272/2008:

Hazard pictograms:



GHS05



GHS07

Signal word: Danger

Hazard Statements:

H302: Harmful if swallowed
H318: Causes serious eye damage

Precautionary Statements:

Prevention: P264: Wash hands thoroughly after handling
P270: Do not eat, drink or smoke when using this product

Response: P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310+P330: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.

Disposal: P501: Disposal of contents/container to be specified in accordance with State, Federal and Local regulations.

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 12/10/2014

Revision: 12/10/2014

Trade Name: E100-VB5™ - Epoxy Vapor Barrier – Part B

Hazards no classified: Harmful if swallowed. Severe eye irritant. Moderate respiratory irritant. Moderate skin irritant. Risk of serious damage to eyes.

Hazard description:

Canadian WHMIS Classification:

non corrosive, non hazardous

WHMIS-symbols:

None required

NFPA ratings (scale 0 – 4)



Health = 2
Fire = 1
Reactivity = 0

HMIS-ratings (scale 0 – 4)

Health	2
Fire	1
Reactivity	0

Health = 2
Fire = 1
Reactivity = 0

2.3 Other hazards

No known

3 Composition/information on ingredients

3.2 Mixture.

Description: Mixture of substances listed below with nonhazardous additives.

Hazardous components:

Identification #	Description	WT. %
CAS: 100-51-6 EINECS: 202-859-9	Benzyl Alcohol GHS Classification: Not hazardous	30-%
CAS: priority EINECS:	Manic Base Adduct GHS Classification Not Hazardous	70%

Additional information: WHMIS Ingredient Disclosure List.

WHMIS Trade Secret Registry Number: 6160 Grant date 2/14/2007

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 12/10/2014

Revision: 12/10/2014

Trade Name: E100-VB5™ - Epoxy Vapor Barrier – Part B

4 First aid measures

4.1 Description of first aid measures

After inhalation:

If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention if breathing difficulty continues.

After skin contact:

Wash skin thoroughly after handling. Seek medical attention if irritation develops and persists. Remove contaminated clothing. Launder contaminated clothing before re-use.

After eye contact:

If product enters the eyes, open eyes while under gentle running water for at least 15 minutes. Seek medical attention if irritation develops.

After swallowing:

If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or MSDS with the victim to the health professional.

4.2 Most important symptoms and effects, both acute and delayed.

Acute: This material may cause irritation to the respiratory tract and skin and even burns. Product may cause an allergic skin reaction.

Chronic: Prolonged or repeated skin contact may cause dermatitis.

Hazards: Pre-existing skin or respiratory system problems may be aggravated by exposure to this product.

4.3 Indication of any immediate medical attention and special treatment needed:

Treat symptoms and reduce over-exposure.

5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

Carbon dioxide, foam, dry chemical, halon, water spray, sand, limestone powder.

5.2 Special hazards arising from the substance or mixture:

Incomplete combustion may form carbon monoxide. May generate ammonia gas. May generate toxic nitrogen oxide gas. Burning produces toxic and noxious fumes. Down wind personnel must be evacuated.

5.3 Advice for firefighters:

Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures: Personnel should be trained for spill response operations.

6.2 Environmental precautions: All work practices must be aimed at eliminating environmental contamination.

6.3 Methods and material for containment and cleaning up: Contain spill if safe to do so. Prevent entry into drains, sewers, and other waterways. Soak up with a non-combustible absorbent material and place in an appropriate container for disposal. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations).

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 12/10/2014

Revision: 12/10/2014

Trade Name: E100-VB5™ - Epoxy Vapor Barrier – Part B

7 Handling and storage

7.1 Precautions for safe handling

As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapors/mists generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:

. Do not store near acids.. keep containers tightly closed in a cool dry and well ventilated place.

7.3 Specific end use(s): keep from freezing.

8 Exposure controls/personal protection

Additional information about design of technical facilities:

Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above. Use local exhaust ventilation to control airborne vapor. Ensure eyewash/safety shower stations are available near areas where this product is used.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

Currently, International exposure limits are not established for the components of this product. Please check with competent authority in each country for the most recent limits in place.

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

Respiratory protection: Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

Protection of hands: Use chemical resistant gloves to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.



Protective gloves

Material of gloves:

The selection of suitable gloves does not only depend on the material, but also on the quality, and varies from manufacturer to manufacturer.

Eye protection: Safety glasses or chemical goggles as appropriate to prevent eye contact. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.



Safety goggles

Body Protection:

Use body protection appropriate to prevent contact (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards.

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 12/10/2014

Revision: 12/10/2014

Trade Name: E100-VB5™ - Epoxy Vapor Barrier – Part B

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form:

Liquid

Color:

Hazy to amber to brown liquid

Odor:

Slight ammonia

Odor threshold:

Not Available

pH-value:

11.2

Change in condition

Melting point/Melting range:

No data available

Boiling point/Boiling range:

212°F (100°C)

Flash point:

N/A

Flammability (solid, gaseous):

No data available

Auto/Self-ignition temperature:

Not established

Decomposition temperature:

No data available

Self-igniting:

No data available

Danger of explosion:

N/A

Explosion limits

Lower:

Not established

Upper:

Not established

Vapor pressure at 20 °C:

No data available

Density at 20°C:

67.422 lb/ft³ (1.08g/cm³) @ 70°F (21°C)

Relative density:

8.66 pounds per gallon @ 25°C

Vapor density:

No data available

Evaporation rate:

No data available

Solubility in / Miscibility with Water:

Not Available

Specific Gravity 20°C: (Water = 1):

Not Available

Viscosity:

400 cps (400mPa) @ 77°F

Solvent content:

Organic solvents:

0

VOC (EC)

0.00%

9.2 Other information

No data available

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 12/10/2014

Revision: 12/10/2014

Trade Name: E100-VB5™ - Epoxy Vapor Barrier – Part B

10 Stability and reactivity

10.1 Reactivity

10.2 Chemical stability: Product is stable

Thermal decomposition / conditions to be avoided: When heated to decomposition this product produces noxious gases such as CO, CO₂, NO_x, amines, ammonia and others.

10.3 Possibility of hazardous reactions: No data available

10.4 Conditions to avoid: no data

10.5 Incompatible materials: organic acids, citric acid, acetic acid, etc

10.6 Hazardous decomposition products: Nitric acid, Ammonia, Nitrogen oxides (NO_x), Nitrogen oxide can react with water vapors to form corrosive nitric acid.

11 Toxicological information

11.1 Information on toxicological effects: Toxicity data is available for this product

Acute toxicity:

Acute Dermal	LD 50	>2,000 mg/kg	Rabbit
Acute Oral	LD 50	>2,000 mg/kg	Rat

Primary irritant effect: Contact with this product can be irritating to exposed skin, eyes and respiratory system.

Sensitization: This product is considered a skin sensitizer.

Additional toxicological information:

None of the ingredients are found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, IARC and therefore is not considered to be, nor suspected to be a cancer-causing agent by these agencies.

Reproductive toxicity information: No information concerning the effects of this product and its components on the human reproduction system.

12 Ecological information

12.1 Toxicity

Aquatic toxicity: No data available

12.2 Persistence and degradability: No data available

12.3 Bioaccumulative potential: No data available

12.4 Mobility in soil: No evidence is currently available on this product's effects on plants or animals.

Ecotoxicological effects:

Remark:

Additional ecological information: No data available

General notes:

Component Information:

no other information available

13 Disposal considerations

13.1 Waste treatment methods

Recommendations:

Waste disposal must be in accordance with appropriate Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

RCRA WASTE CODE: D002

EU WASTE CODE: To Be Established

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 12/10/2014

Revision: 12/10/2014

Trade Name: E100-VB5™ - Epoxy Vapor Barrier – Part B

14 Transport information

14.1 UN-Number

DOT: CAN: ADR: ADN: IMDG: IATA: NOT REGULATED

14.2 UN proper shipping name

ADR: DOT: CAN: ADR: ADN: IMDG: IATA: NOT REGULATED

14.3 Transport hazard class(es)

DOT: CAN: ADR: ADN: IMDG: IATA:

Class:

NOT REGULATED

Label:

14.4 Packing group

DOT: CAN: ADR: ADN: IMDG: IATA: NOT REGULATED

14.5 Environmental hazards:

Marine pollutant:

NOT REGULATED

14.6 Special precautions for user

Danger code (Kemler):
EMS Number:

No data available

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:

No data available

Transport/Additional information

ADR

Limited Quantities (LQ)
Excepted Quantities (EQ)

No data available

Transport Category:

Tunnel restriction code:

UN "Model Regulation":

No data available

Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 12/10/2014

Revision: 12/10/2014

Trade Name: E100-VB5™ - Epoxy Vapor Barrier – Part B

15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture. United States (USA)

SARA: This product is not subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act.: None

Section 355 (extremely hazardous substances): None of the ingredients are listed.

Section 313 (Toxic Release Inventory): None of the ingredients are listed.

TSCA (Toxic Substances Control Act): All ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients is listed.

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed

Canadian Ingredient Disclosure list (limit 0.1%):

None of the ingredients are listed.

Canadian Ingredient Disclosure list (limit 1%):

None of the ingredients are listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

WHMIS Ingredient Disclosure List.

WHIMS Trade Secrete Registry Number(s) 6160 Grant date 2/14/2007

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Hazard Statements:

H302: Harmful if swallowed

H318: Causes serious eye damage

Precautionary Statements:

Prevention: P264: Wash hands thoroughly after handling

P270: Do not eat, drink or smoke when using this product

Response: P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310+P330: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.

Disposal: P501: Disposal of contents/container to be specified in accordance with State, Federal and

Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation.

IATA: International Air Transport Association.

ACGIH: American Conference of Governmental Industrial Hygienists.

EINECS: European Inventory of Existing Commercial Chemical Substances.

ELINCS: European List of Notified Chemical Substances.

CAS: Chemical Abstracts Service (division of the American Chemical Society).

NFPA: National Fire Protection Association (USA).

HMIS: Hazardous Materials Identification System (USA).

LC50: Lethal concentration, 50 percent.

LD50: Lethal dose, 50 percent.