

MSDS.520 – E100-NV5™ High Performance Novolac Epoxy Coating – Part B

Revised: 2/27/11

Material Safety Data Sheet

(Date of Revision 2/27/2011)

MSDS# 520

Product Name: E100-NV5™ High Performance Novolac Epoxy Coating – Part B

Section: 1 – IDENTIFICATION

Product name: E100-NV-5™ High Performance Novolac Epoxy Coating – Part B**Product Type:** Epoxy Curing Agent (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 hazardous as defined within OSHA Hazard Communication Standard 29CFR1910.1200

Classification: Corrosive to Skin & Eyes causes burns... Dangerous for the Environment.**Emergency overview:** DANGER! HARMFUL IN CONTACT WITH SKIN, CAUSES EYE AND 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>
Benzyl alcohol	100-51-6	<10-30%
Benzene-1,3-dimethanamine (MXDA)	1477-55-0	<60-80%-

Chemical family: Aliphatic Amines

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: Do not induce vomiting. 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 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 or 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:
>234 F (112 C)		
Flammable limits in Air:	Not established for this product	Auto ignition 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.
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	Regulation	Remarks
Benzene-1,3-dimethanamine (MXDA)	ceiling limit value ACGIH	0.1 mg/m ³
Benzyl Alcohol	Time weighted average (TWA):WEEL	10 ppm 44.2 mg/m ³

Section: 9 – PHYSICAL & CHEMICAL PROPERTIES

Appearance:	amber Liquid	Color	clear , amber
Flash Point:	>112.78 °C	Vapor pressure:	<7.50 mmHg @ 70F (21 °C)
Relative Density:	1.10 (water=1)	Solubility in Water:	<0.1 g/l
PH	>11	Odor:	fishy
Density	68.671 lb/ft ³ (1.10g/cm ³)@70 °F(21 °C)	Boiling Point range:	225 °F (107.22 °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:	LD50:1,230 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 Irritation/corrosion:	Severe Skin irritation., corrosive to the skin of a rabbit
Sensitization:	may cause sensitization by skin contact
Chronic Health Hazard	The product or component may be mutagenic, the data inconclusive.

Section: 12 – ECOLOGICAL INFORMATION

Environmental effects	
Ecotoxicity effects:	
Aquatic Toxicity:	No data available on product itself
Toxicity to fish- Components	
NonylPhenol	LC50 (96h):0.10 mg/l Species: bluegill (Lepomis macrochirus)
Toxicity to algae- Components	

Benzyl Alcohol LC50(72h):700 mg/l Species: Algae
Persistence and Degradability
Bioaccumulation-Components:
Benzyl Alcohol Low bioaccumulation potential

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:	UN2735	Amines, Liquid, Corrosive, N.O.S. (Benzene-1,3-dimethanamine (MXDA),	class 8 III
CFR_ROAD:	UN2735	“ “	“ “
IMO/IMDG:	UN2735	“ “	“ “
IATA_Cargo:	UN2735	“ “	“ “
TDG	UN2735	“ “	“ “

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:
 This product contains Epichlorohydrin CAS # 106-89-8 (trace amount).
New Jersey Right to know Chemical List: Isophorone Diamine
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 3, Flammability 1, Physical hazards: 1. Chronic 0, Reactivity 0,

Section: 16 – OTHER INFORMATION

Reference: Prepared in accordance with 29 CFR 1910.1200 Elite Crete Systems, R & D Lab