Safety Data Sheet

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

Printing Date: 10/21/2014 **Revision:** 10/21/2014

Trade Name: E100-VR1™ - Clear UV Resistant Epoxy – Part B

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

1.1 Product identifier

Trade Name: E100-VR1™ Part B

1.2 Article No.: E100-VR1™ 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, H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
Acute Inhalation Toxicity Category 4, H322 Harmful if inhaled.
Acute Oral Toxicity Category 4, H302 Harmful if swallowed.
Skin Sensitization Category 1, H317 May cause allergic skin reaction
Skin Corrosion/Irritation Category 1B, H314 Causes severe skin burns and eye damage.
Acute Aquatic Toxicity Category 1, H400 Very Toxic to Aquatic life.
Chronic Aquatic Toxicity Category 1, H410 Vary toxic to aquatic life with long lasting effects.

Classification according to Directive 1999/45/EC:


C; Corrosive
R34: causes Burns


Xn; harmful
Xi; Sensitizing
R43; May cause skin sensitization by skin contact.


N: Dangerous for the environment.
R50/53; Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Information concerning particular hazards for human and environment:

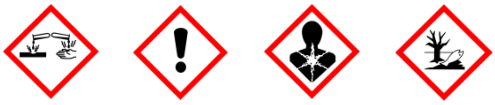
Product Description: This product is a pale straw – yellow colored liquid with mild ammonal odor.
Health Hazards: Harmful if swallowed; Corrosive, CNS depressant; Severe Eye Irritant, Severe Respiratory Irritant, May cause skin sensitization
Flammability Hazards: Not Applicable

Reactivity Hazards: None known.

2.2 Label elements

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

Hazard pictograms:



GHS05 GHS07 GHS08 GHS09

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Signal Word: Danger

Hazard-determining components of labeling:

Contains m-phenylenebis (methylamine)

4-nonylphenol, branched

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Hazard statements:

H302+H332: harmful if swallowed or if inhaled.

H314: Causes severe skin burns and eye damage

H317: May cause allergic skin reaction.

H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child.

H410: Very toxic to aquatic life with long lasting effects.

Precautionary statements

P260: Do not breath 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

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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** HAZARD CLASSIFICATION: RISK PHRASES:	30-50%
CAS: 2855-13-2 EINECS: 220-666-8	**Isophorondiamine** HAZARD CLASSIFICATION: [C] Corrosive RISK PHRASES:	15– 25%
CAS: 2579-20-6 EINECS: 219-941-5	**1,3,Cyclohexanedimethanamine** HAZARD CLASSIFICATION: [Xn] Harmful RISK PHRASES: R37, R43	12 – 30%
CAS: 98-54-4 EINECS: 202-679-0	**4-Tert-Butylphenol** HAZARD CLASSIFICATION: Repr Cat 3, [Xn] Harmful, [C] Corrosive, [N] RISK PHRASES: R22, R62, R63, R34, R50/53	5 – 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 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.

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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

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:

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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
Odor:	Slight amine
Odor threshold:	Not Available

pH-value:	11.5-12
Change in condition	
Melting point/Melting range:	No data available
Boiling point/Boiling range:	No date available
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

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Density at 20°C:	1.04
Relative density:	8.66pounds per gallon @ 25°C
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, NOx, 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

11 Toxicological information

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

Acute toxicity:

LD/LC50 values relevant for classification:

1477-55-0 m-phenylenebis(methylamine)

Oral	LD50	1040 mg/kg (rat)
Inhalative	LC504h	2,4 mg/l (rat)

2855-13-2 3-aminomethyl-3,5 5-trimethylcyclohexylamine

Oral	LD50	1030 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. Also can be a sensitizer thru inhalation by prolonged exposure

Additional toxicological information:

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The product shows the following dangers according to the calculation method of the general EU Classification guidelines for preparations as issued in the latest version:

Harmful

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on the mouth and throat and to the danger of perforation of the esophagus and stomach.

Sensitization: Sensitization is possible by inhalation and/or dermal contact.

Repeated dose toxicity: Repeated exposures may result in skin and /or respiratory sensitivity.

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.

Ecotoxical 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

14 Transport information

14.1 UN-Number	
DOT: CAN: ADR: ADN: IMDG: IATA:	**UN2735**
14.2 UN proper shipping name	
DOT: CAN: ADN: IMDG: IATA:	**Amines, Liquid, Corrosive, N.O.S. Contains : (ISOPHRONEDIAMINE)**
ADR:	**2735 Amines, Liquid, Corrosive, N.O.S. Contains: (ISOPHRONEDIAMINE)**

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14.3 Transport hazard class(es)

DOT: CAN :IMDG; IATA: ADN:

Class: **Class 8 Corrosive substances**

Label:

ADR:

Class: **Class 8 (C7) Corrosive substances**

Label

14.4 Packing group

DOT, ADR, IMDG, IATA: TGD **PG II**

14.5 Environmental hazards:

Marine pollutant: **YES**

Special marking (**ADR**)

14.6 Special precautions for user **Warning corrosive substances**

Danger code (Kemler): **80**

EMS Number: **F-A,S-B**

Segregation groups: **Alkalis**

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: **Not applicable**

Transport/Additional information

ADR

Limited Quantities (LQ) **5L**

Excepted Quantities (EQ) **Code E1**

Maximum net quantity per inner packaging 30ml

Transport Category: **Maximum net quantity per outer packaging 1000 ml**

Tunnel restriction code: **3**

E

UN "Model Regulation": **UN2735 Amines, Liquid, Corrosive, N.O.S. (Contains (ISOPHRONEDIAMINE)**

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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.

Chemicals known to cause reproductive toxicity for males or females: None of the ingredients listed

Chemicals known to cause development toxicity:
None of the ingredients listed
Carcinogenic categories:
EPA, IARC, TLV, NIOSH-Ca, OSHA-Ca, :
None of the ingredients 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.

Canadian Ingredient Disclosure list (limit 0.1%)
None of the ingredients listed.
Canadian Ingredient Disclosure list (limit 1%)
1477-55-0 m-phenylenebis(methylamine)
2855-13-2 3-aminomethyl-3,5,5-trimethylcyclohexylamine

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

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

Precautionary statements

P260: Do not breath 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.