

HERMETIC™ Flake

Flooring System



CSI Division 9: Finishes - Flooring

elite crete systems

Engineered High Performance Surfaces & Flooring

HERMETIC™ Flake Floor is a durable, seamless, chemical resistant floor providing adjustable levels of slight texture and color to match any design theme or surroundings.

TYPICAL AREAS OF USE

- Public areas
- Grocery stores
- Airports
- Showrooms
- Retail
- Theme parks
- Hospitality
- Hospitals
- Educational
- Automobile showrooms

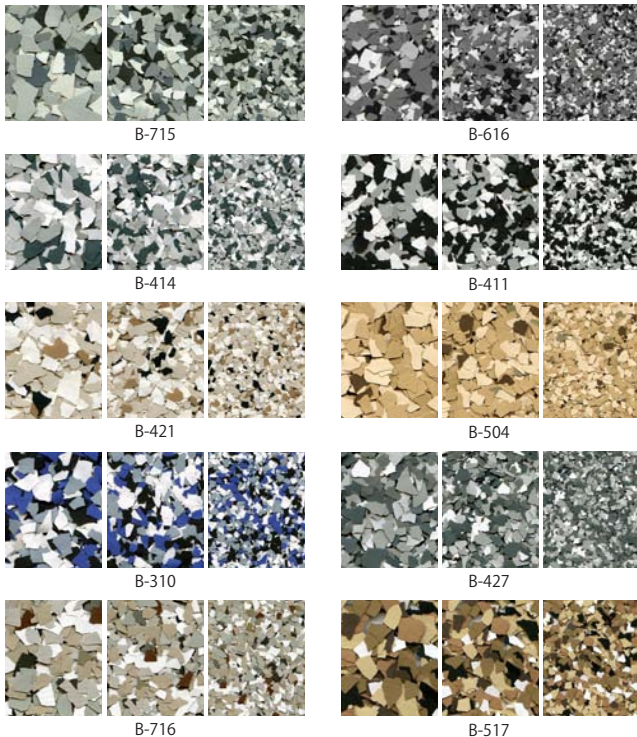
ADVANTAGES

- Ease of maintenance
- Aesthetic improvements
- Hygienic seamless finish
- 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

SPECIFICATION OVERVIEW

- Name: HERMETIC™ Flake Floor
- 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.

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	77 to 81
Water Absorption (2hr boil)	ASTM D-570	0.12 %
Toxicity	N/A	None*
Heat Distortion Temperature	ASTM D-648	129 F / 54 C
Compressive Strength	ASTM D-695	12,100 psi
Tensile Strength	ASTM D-638	3,200 psi
Flexural Strength	ASTM D-790	4,600 psi
Abrasion Resistance **	ASTM D-4060	12 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	6.0 %
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	0.80

* FDA & USDA Acceptable

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



elite crete systems

Elite Crete Systems, Inc.

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Valparaiso, Indiana 46383

Phone: +1.219.465.7671 Fax: +1.219.531.0898

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www.elitecrete.com

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.

PI.733 – Installation Procedures: HERMETIC™ Flake Floor

Revised: 1.8.16

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™ Flake 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 flake floor. 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 base color coat that will be flaked into and E100-VR1™ for the clear top coat. If a different product is specified or used, contact a Technical Representative to discuss differences 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 115 to 125 square foot per combined mixed gallon. A notched squeegee can also be used for this step if preferred.
6. While wearing spiked shoes, walk onto the wet epoxy and begin to broadcast the colored flakes evenly at an average rate of 5 to 7 square feet per pound. Do not toss the flakes towards the floor. Instead toss the flakes up into the air and allow to fall naturally. Do not walk on the flakes with the spiked shoes on. Once the entire floor and all the flakes appear to be dry, allow the floor to cure out. Cure is about 8 hours for Standard Set and 4 hours for Fast Set.
7. Once cured and dry, removed excess loose flake with a broom or vacuum. Use a scraper or screen and vacuum the floor again.

NOTE: Often times a second broadcast flake coat is required or specified. If this is the case, repeat steps 5 through 7 before proceeding.

8. Mix the E100-VR1™ 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-VR1™ 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 115 to 125 square foot per combined mixed gallon. A notched squeegee can also be used for this step if preferred. Second or consecutive coats are optional.
9. OPTIONAL: One to two coats of AUS-V™ with or without AGG.

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: 10/20/2014

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:

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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 and 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: 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.

Hazard description:

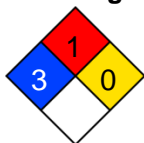
Canadian WHMIS Classification:

- 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: 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.

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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

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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)

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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

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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)

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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): 80
EMS Number: 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

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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.

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)

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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.

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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

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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.

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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.

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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

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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.

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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.

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

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

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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.

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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.

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.