

TD.473 – TECHNICAL DATA: E100-VR1™ Clear UV Resistant Epoxy

Revised: 11/7/2023 Version: 2.1

Product Class: Clear epoxy protective coating.

Description:

E100-VR1™ is 100% solids, UV resistant, low viscosity, clear, high gloss, two-component epoxy coating, specifically designed for interior UV exposure. This VOC free, antimicrobial coating is blush resistant to high humidity conditions during applications.

Typical Uses:

- As a “cove base” primer, binder and as a clear top coat.
- General sealing and protection of interior concrete floors.
- Protective sealer for interior polished concrete floors.
- As a clear coat for interior cementitious overlayments.
- **REFLECTOR™ Enhancer Flooring Systems:** As base coat where a vapor barrier epoxy is not required, as the pigment/color coat and as a clear top coat.
- **HERMETIC™ Neat Floor:** As base coat where a vapor barrier epoxy is not required, pigmented coat using special powdered pigment and as a clear top coat.
- **HERMETIC™ Flake Floor:** As base coat where a vapor barrier epoxy is not required, pigmented coat using special powdered pigment and as a clear top coat.
- **HERMETIC™ Color Quartz Floor:** As base coat where a vapor barrier epoxy is not required, pigmented coat using special powdered pigment and as a clear top coat.
- **HERMETIC™ Stout Floor:** As base coat where a vapor barrier epoxy is not required, pigmented coat using special powdered pigment and as a clear top coat.
- **HERMETIC™ Paramount Floor:** As base coat where a vapor barrier epoxy is not required, pigmented coat using special powdered pigment, slurry binder and as a clear top coat.
- **HERMETIC™ Paramount Heavy Duty:** As base coat where a vapor barrier epoxy is not required, pigmented coat using special powdered pigment, trowel mix binder and as a clear top coat.

*** E100-Series Liquid Pigment may be used in place of the Specialty Powdered Pigment; however, it may reduce the UV resistant properties. ***

Key Features:

- Excellent UV resistance
- High chemical resistance
- 100% self leveling
- Auto air release
- Low to no odor
- Will not blush or water spot
- USDA and CFIA compliant
- Non-shrinking

Limitations:

- Not for use on exterior concrete
- Requires a vapor barrier epoxy in some instances to protect from vapor emission or moisture concerns.
- Not recommended for surfaces subject to continuous water submersion.

Product Properties: Material and curing conditions at 75° F / 24° C unless noted, 50% R.H.

Viscosity: @ 75° F / 24° C

Part A: 2,000 cP
 Part B: 80 cP
 Mixed: 600 cP

Cure: @ 75° F / 24° C

Pot life: 15 minutes
 Tack free: 7 to 8 hours
 Full traffic: + 24 hours

Mix Ratio: 2 Parts A to 1 Part B by volume

Coverage:

- Based on the versatility and areas of use that E100-VR1™ is used, coverage varies based on the “system” it is used in. Contact an Elite Crete Systems Technical Office for recommendations.

Available Packaging:

- 3, 15, and 150 gallon kit

Cautions, Clean Up, and First Aid:

- Although E100-VR1™ has little or no odor and carries zero VOC, it should only be used with adequate ventilation. Avoid contact with eyes and skin. DO NOT TAKE INTERNALLY. KEEP OUT OF REACH OF CHILDREN. Ensure fresh air entry during application. If you experience watering eyes, headaches, or dizziness or if air monitoring demonstrates vapor levels are above applicable limits, wear a properly fitted respirator (NIOSH/MSHA TC 23C approved) during and after application. Follow respirator manufacturer’s directions for use. E100-VR1™ is an irritant which can develop redness of skin and allergic reaction. Always use protective clothing, gloves and eye wear.
- Refer to SDS.449 for additional information before use.

Physical Properties

(@77° F / 25° C, 50% R.H. 7-day ambient cure)

Compressive strength	ASTM D695	11,900 psi
Tensile strength	ASTM D638	2,800 psi
Elongation at break	ASTM D638	3.9%
Flexural strength	ASTM D790	6,200 psi
Abrasion resistance		
CS-17 Wheel, 1 kg load	ASTM 4060	9 mg loss
Water absorption (2-hour boil)	ASTM D570	0.07%
Shore D hardness	ASTM D2240	76-85
Heat distortion temperature	ASTM D648	130° F / 54° C
Volatile organic content (VOC)		0 g/L
Coefficient of friction	ASTM D2047	> 0.6
Reaction to fire	EN 13501-1:2018	B _{FL} – s1

Chemical Resistance

Water (fresh and salt)	Butanol
1%-50% Sodium Hydroxide	Xylene
1%-10% Sulfuric Acid	111 Trichloroethane
1%-10% HCL	Oil
	Gasoline

See TD.400 for complete list.

Additional Notes:

- See document: *TD.200 – Resinous Flooring Guidelines* for information pertaining to rising damp, vapor transmission, and applicable recommended testing methods prior to use.
- Preconditioning 100% solid epoxy resins - When exposed to prolonged periods of cold temperature, epoxy resins typically thicken, may crystalize, and become harder to flow or spread. To improve the product flow-ability maintain temperature at about 70° F / 21° C before mixing. Crystalized epoxy can be reconstituted at 90° F / 32° C for 12 hours and remixed.

Suggested Storage:

- Store in a temperature and weather-controlled area between 65° F / 18°C and 85° F / 29° C.
- Do not allow to freeze.
- Shelf Life: 1 year from date of manufacture.