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TD.462 – TECHNICAL DATA: E100-PT1™-SHD Clear Epoxy

Revised: 11/7/2023 Version: 1.8

Product Class: A thin or high build clear epoxy coating and mortar binder for commercial and industrial applications.

Description: E100-PT1™-SHD Clear Epoxy is 100% solids, low viscosity, water-clear, non-shrink, two-component epoxy designed for a wide variety of applications. E100-PT1™-SHD Clear Epoxy will not blush or water spot and has excellent physical and chemical resistant properties. E100-PT1™-SHD Clear Epoxy is available in standard and fast set formulas.

Typical Uses:

- Sealing and protecting interior concrete floors
- Primer for epoxy mortars
- Clear protective top coat for epoxy applications
- As a clear protective coating for interior flooring, polymer modified concrete overlays, and industrial floors
- As a thin textured “orange peel” finish for industrial floors
- Crack repair, joint repair, or surface repair mixes
- **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.

Key Features:

- High-gloss, non-blush film
- Near zero odor
- 100% solids (0% VOC)
- Non-shrink coating
- Self-leveling and air releasing
- Low viscosity
- Antimicrobial
- Easily pigmented in the field
- Fast cure rate
- Excellent strength properties
- Excellent impact resistance
- Easy to place
- Unsurpassed adhesion properties
- USDA, CFIA, and FDA compliant
- 2 to 1 ratio by volume

Product Properties: Material and curing conditions at 73° F / 23° C unless noted, 50% R.H.

- Color: Clear
- Viscosity @ 73° F / 23° C
  - Part A: 500 cps
  - Part B: 120 cps
  - Mixed: 300 cps
- Pot Life: 15 minutes (standard set) 10 minutes (fast set)

	Standard Cure	Fast Set
Tack free:	7 to 8 hours	3 to 4 hours
Foot traffic:	24 hours	12 hours
All traffic:	72 hours	24 hours

Physical Properties
@73° F / 23° C, 7-day ambient cure at 50% R.H.

Compressive strength	ASTM D695	12,000 psi
Tensile strength	ASTM D638	2,100 psi
Elongation at break	ASTM D638	6.1%
Flexural strength	ASTM D790	6,500 psi
Abrasion resistance		
CS-17 wheel, 1 kg load	ASTM D4060	30 mg loss
Water absorption (2-hour boil)	ASTM D570	0.09%
Shore D hardness	ASTM D2240	82 (7 days)
Coefficient of friction	ASTM D2047	> 0.6
Heat distortion temperature	ASTM D648	120° F / 49° C
Volatile organic content		0 g/L
Slant shear	ASTM C882	100% concrete failure
Pull-off adhesion	ASTM D7234	450 psi / 3.1 Mpa / concrete failure
Reaction to fire	EN 13501-1:2018	B_{FL} – s1

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Chemical Resistance:
Splash & Spill Applications

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

Limitations:
- Not for use on exterior concrete
- Requires a vapor barrier epoxy in some instances to protect from vapor emission or moisture concerns.
- Subject to UV degradation when exposed to direct sunlight for long period of time (See E100-VR1™ for substitute).
- Not recommended for surfaces subject to continuous water immersion.

Available Packaging:
- 1.5 gal, 3 gal, 15 gal, and 150 gal kits

Cautions, Clean Up, and First Aid:
- Although E100-PT1™-SHD has little or no odor and carriers 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-PT1™-SHD is an irritant which can develop redness of skin and allergic reaction. Always use protective clothing, gloves and eye wear.
- Refer to SDS.441 for additional information before use.

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.