PRODUCT DATA SHEET

SERIES 454 | CPP TROWEL-LINER™

PRODUCT PROFILE

GENERIC DESCRIPTION

Ultra-High Build, Structural-Grade, Trowel-Applied Microfiber Reinforced Polymer (FRP) Polyamidoamine Epoxy

COMMON USAGE

Epoxytec CPP Trowel-Liner™ is a two-component, ultra-high build, high-strength, trowel-applied microfiber-reinforced polymer (FRP) epoxy. CPP Trowel-Liner™ is versatile and can be used as a repair compound or as an ultra-high build, standalone protective liner for sanitary sewer collection systems, wastewater treatment structures, or potable water infrastructure (certified NSF/ANSI/CAN Standard 61). The material can be applied up to 1/2" (500 mils) per pass (vertical/overhead) without sag. Blended with reinforcing agents and proprietary microfibers, Epoxytec CPP Trowel-Liner™ when cured provides a microfiber-reinforced polymer (FRP) with high mechanical strength. CPP Trowel-Liner™ bonds to concrete, steel, brick, and most construction materials for repair, sectional lining, or full monolithic applied lining to protect against corrosion and to seal from inflow and infiltration (I&I). This is achieved by the product's formulated balance of properties of high-strength, acid protection, and high surface acceptance to saturated surface dry (SSD) conditions able to cure within high humidity environments.

COLORS

Off-White

FINISH

Slightly textured

SPECIAL QUALIFICATIONS

Underwriters Laboratories Inc.® classified to **NSF/ANSI/CAN Standard 61** and the extraction requirements of **NSF/ANSI/CAN 600)** for use in potable water storage.

COATING SYSTEM

SURFACER/FILLER/PATCHER

Mortartec Ceramico, Mortartec Silicate, Series 217, N218

PRIMERS

Self-priming, Series 451 CPP Sprayliner MH, 456 CPP Sprayliner, 457 CPP Sprayliner 61, Tnemec Series L69F Hi-Build Epoxoline II, N69F Hi-Build Epoxoline II, V69F Hi-Build Epoxoline II.

TO TOPCOAT WINDOW AT 75°F (24°C)

Primer	Minimum Time	Maximum Time
Series L69F, N69F, V69F	3 hours	7 days
CPP Trowel-Liner	*	5 days
Series 451, 456, 457	*	5 days

* No minimum cure time but film shall be capable of supporting weight of topcoat to avoid sagging.

SURFACE PREPARATION

CONCRETE

Allow new cast-in-place concrete to cure a minimum of 28 days at 75°F (24°C). Prepare the concrete by abrasive blasting, high or ultra-high pressure water cleaning, and/or approved mechanical methods to achieve clean, sound, and profiled concrete in accordance with SSPC-SP13/NACE No. 6. "Surface Preparation of Concrete." A minimum ICRI profile of CSP 5 or higher shall be achieved with a minimum pH 9. Large cracks, voids and other surface imperfections should be filled with a recommended filler or surfacer. **Note:** Epoxytec CPP Trowel-Liner™ is self-priming and may be applied direct to concrete (DTC). However, should an abnormal or conditional situation exist (i.e. outgassing, MVT, etc), primers and/or resurfacers (although optional) can assist, and may be recommended.

STEEL

Before preparing steel, please inspect and remove oil, grease, or other contaminants. Abrasive blasting (or other approved mechanical methods) must be used in order to achieve a clean surface in accordance with SSPC-SP10/NACE No. 2 "Near White Blast Cleaning" and a minimum profile of 4.0 mils (100 microns). To prevent flash rusting, consider the use of a Tnemec recommended holding primer. Contact your Tnemec representative for recommendation.

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ALL SURFACES

Surface must be clean, sound and profiled. Remove all dust, contaminants, grease, curing compounds, rust, impregnation, waxes, foreign particles, and disintegrated materials from the surface, in order to achieve a clean and profiled surface. Methods outlined herein are a basis of design for generalized guidance. Refer to epoxytec.com for additional system design detail and guidelines; please consult with your Tnemec representative on other specific design considerations.

TECHNICAL DATA

VOLUME SOLIDS

100%

RECOMMENDED DFT

Repair Compound:

"Feather Edge": 1/16", 32.0 mils (815 microns) - 1/2", 500 mils (12,700 microns)

Lining:

Mild Conditions, as a Protective Coating, Non-Structural: 80.0 mils (2030 microns) minimum.

I&I or Aggressive Conditions, as a High Strength Liner, Structural Film: 125.0 mils (3175 microns) minimum

For Potable Water: Refer to **Underwriters Laboratories Inc.®** website for film thickness listings.

Note: "Structural" reference herein describes an applied and bonded high-strength film designed to hold back low pressure inflow/infiltration (I&I) and other low pressure water transmission through concrete. For structures requiring fully structural design consideration, criteria and variables will need to be calculated for specific design thickness recommendations by a licensed professional engineer.

CURING TIME

Temperature	To Topcoat	Non-Potable Water	Potable Water
77°F (25°C)	2 hours	24 hours	72 hours

VOLATILE ORGANIC COMPOUNDS (VOCs)

0.00 lbs/gal (0 g/l)

THEORETICAL COVERAGE

1,604 mil sq ft/gal (39.3 m²/L at 25 microns). See APPLICATION for coverage rates.

NUMBER OF COMPONENTS

Two: Part A (Epoxy) and Part B (Amine)

PACKAGING

	Part A (partially filled)	Part B (partially filled)	Yield (mixed)
Small Kit	3.5 gallon can	1 gallon can	2.0 gallons (7.57 L)

NET WEIGHT PER GALLON

8.68 ± 0.25 lbs (3.93 ± 0.11 kg) (mixed)

STORAGE TEMPERATURE

For optimum handling and application characteristics both material components should be stored or conditioned between 75°F (24°C) and 85°F (29°C) 48 hours prior to use.

TEMPERATURE RESISTANCE

Contact your Tnemec Representative for more information.

SHELF LIFE

24 months at recommended storage temperature.

FLASH POINT - SETA

Part A: >230°F (110°C) Part B: 259°F (126°C)

HEALTH AND SAFETY

This product contains chemical ingredients which are considered hazardous. Read container label warning and Safety Data Sheet for important health and safety information prior to the use of this product. **Keep out of the reach of children.**

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APPLICATION

COVERAGE RATES

	Dry Mils (mm)	Wet Mils (mm)	Sq Ft/Gal (m^2/Gal)
Minimum (Non-Structural)	80.0 (12.7)	80.0 (12.7)	20 (1.86)
Minimum (Structural Film)	125.0 (3.2)	125.0 (3.2)	12.8 (1.19)
Maximum (per coat)	500.0 (12.7)	500.0 (12.7)	3.2 (0.3)

Note: For potable water applications, visit the **Underwriters Laboratories Inc.®** website for current film thickness listings.

MIXING

Add Part B to Part A and mix for a minimum of two to three minutes with a high power mortar drill until a homogenous blend (uniformed color, with no streaks) is achieved. Mix with movement, getting the pail's edges, walls, and bottom. Do not add sand or aggregate; special thixotropes are incorporated to allow up to 0.5 inches (1.27 cm) or greater at 70°F (21°C) of fill and hang on vertical or overhead surfaces without sagging, and to achieve performance properties.

THINNING

Do not thin.

POT LIFE

30 minutes at 77°F (25°C)

APPLICATION EQUIPMENT

Apply by mortar hawk and trowel, spatula, or other hand-applied methods.

Finish Roll: Use a high quality 1/4" nap, shed resistant, woven fabric roller, lightly dampened with potable water or Tnemec No. 2 Thinner to backroll and finish trowel application.

SURFACE TEMPERATURE

Minimum 45°F (7°C) Maximum 130°F (54°C)

MATERIAL TEMPERATURE

For optimum handling and application characteristics, both material components should be stored or conditioned between 70°F (21°C) and 85°F (29°C) 24 hours prior to use. Temperature will affect the workability. Cool temperatures increase viscosity and decrease workability. Warm temperatures will decrease viscosity and shorten the pot life.

CLEANUP

Clean with Tnemec No. 2 or No. 42 Thinner.