PRODUCT DATA SHEET

SERIES 454FC | CPP TROWEL-LINER™

EPOXYTEC™

PRODUCT PROFILE

GENERIC DESCRIPTION

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

COMMON USAGE

Series 454FC CPP Trowel-Liner™ is a fast-cure, two-component, 100% solids, ultra-high build, high-strength, trowel-applied microfiber-reinforced polymer (FRP) epoxy. This versatile product 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. The material can be applied up to 1/2" (500 mils) per pass (vertical/overhead) without sag. Blended with reinforcing agents and proprietary microfibers, when cured it 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, high surface acceptance to saturated surface dry (SSD) conditions, and ability to cure within high humidity environments.

COLORS

5031 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, Tnemec Series 217 MortarCrete, N218 MortarClad

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.

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 TrowelLiner 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.

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.

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Published technical data and instructions are subject to change without notice. The online catalog at epoxytec.com should be referenced for the most current technical data and instructions or you may contact your Epoxytec representative for current technical data and instructions.

TECHNICAL DATA

VOLUME SOLIDS
100% (mixed)

RECOMMENDED DFT
Repair Compound:
"Feather Edge": 1/16", 62.0 mils (1.6 mm) - 1/2", 500 mils (12.7 mm)
Lining:
Mild Conditions, as a Protective Coating, Non-Structural: 80.0 mils (2.0 mm) minimum.
I&I or Aggressive Conditions, as a High Strength Liner, Structural Film: 1/8", 125.0 mils (3.2 mm) 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 must be calculated for specific design thickness recommendations by a licensed professional engineer.

CURING TIME

Temperature	To Touch	To Handle	Full Cure
40°F (4°C)	1.5 hours	5.5 hours	7 hours
50°F (10°C)	45 minutes	2.5 hours	3 hours
75°F (24°C)	30 minutes	1.5 hours	2 hours

VOLATILE ORGANIC COMPOUNDS (VOCs)
0.001 lbs/gallon (0.12 grams/litre)

HAPS
0.00 lbs/gallon solid

THEORETICAL COVERAGE
1,604 mil sq ft/gal (39.3 m²/L at 25 microns)

NUMBER OF COMPONENTS
Two: Part A (Epoxy) and Part B (Amine)

MIXING RATIO
Mix full kit.

PACKAGING

	Part A (partially filled)	Part B (partially filled)	Yield (mixed)
Small Kit	3.5 gallon pail	1 gallon pail	3.11 gallons (11.78 L)

NET WEIGHT PER GALLON
8.71 ± .25 lbs (3.95 ± 11 kg)

STORAGE TEMPERATURE
Store in a dry area away from direct sunlight.

TEMPERATURE RESISTANCE
Contact your Tnemec Representative for more information.

SHELF LIFE
Part A: 24 months at recommended storage temperature
Part B: 12 months at recommended storage temperature.

FLASH POINT - SETA
Part A: >230°F (110°C) Part B: >212°F (100°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.**

APPLICATION

COVERAGE RATES

	Dry Mils (mm)	Wet Mils (mm)	Sq Ft/Gal (m²/Gal)
Minimum (Non-Structural)	80.0 (2.0)	80.0 (2.0)	20 (1.86)
Minimum (Structural Film)	125.0 (3.2)	125.0 (3.2)	13 (1.19)
Maximum (per coat)	500.0 (12.7)	500.0 (12.7)	3 (0.30)

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 1/2"(12.7 mm) or greater at 70°F (21°C) of fill and hang on vertical or overhead surfaces without sagging, and to achieve performance properties.

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APPLICATION *(cont.)*

THINNING
Do not thin.

POT LIFE
15 minutes at 65°F (18°C) 10 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 risistant, 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.

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