



Structural-grade, reinforced epoxy Compound Polymer Paste

Item# RC3 Revised: 12/13/2014

Description

Epoxytec CPP™ is a two-component moisture insensitive, highly adhesive, chemical resistant, 100% solids, high strength and reinforced structural-grade epoxy. CPP™ is truly versatile and can be used as an adhesive, patching filler, or even as a high-build, stand-alone protective liner. The material can be applied as thin as a skim-coat and up to 1/2" per pass (vertical/overhead). Blended with reinforcing agents and various fibers, the Epoxytec CPP™ when cured acts as a fiber-reinforced-polymer (FRP), with high flexural properties. Contains no solvents (no VOCs). CPP™ bonds to concrete, steel, wood, brick, some plastics and most construction materials.

Typical Uses

CPP™ has been proven in many aggressive, closed, immersive, and partially opened environments. Performs in areas subject to chemical attack, and as a sealer preventing oxidation while holding back water migration and hydrostatic pressure. Ideally suited as a protective coating/lining solution, repair/filling epoxy as:

- Adhesive, segmental and anchoring epoxy
- Patching filler, concrete repair and protection
- Chemical resistant liner
- Ultra high moisture, wet solution sealed barrier
- Industrial and treatment structures, tanks, pipes, stations, manholes, invert sections, flow channels, etc. Including potable water.
(ultra-high hydrogen sulfide [H₂S] resistance [+800ppm] and resistant to sulfuric byproduct)

Film Thickness

CPP™ can be applied as a single coat or multi-coat system. It can be feather-edged from a low mil thickness (almost transparent) to a high build barrier liner of 0.5" (inches) @ 70F thick without sag per coat.

For potable water settings, apply between 30 -120 mils DFT.

For thicker passes, consult Epoxytec for various options.

Theoretical Coverage

CPP™ is 100% solid and will not shrink. Therefore, the theoretical coverage properties between wet film thickness (WFT) and dry film thickness (DFT) are the same. Twenty-six (26) square feet (sq.ft.) per gallon (gal.) at 1/16 inch (62.5 mils) thick. One gallon of neat CPP™ yields 231 cu.in. of epoxy.

Features

- ANSI/NSF-61 Certified
- EPA-ETV Verified for Infrastructure Rehabilitation Technologies
- Indefinite recoat window
- Excellent chemical resistance
- Structural, with movement tolerance
- No sag, ultra-high build, trowel-applied
- Surface & moisture tolerant (cures underwater)
- Ultra-high adhesion, self-priming
- Great for sectional lining requirements
- "Green" - 100% solids, no VOCs



Surface Preparation

The success of any coating application is directly proportional to the completeness of the substrate preparation and the care the application crew puts into the application. Surface must be clean and sound. 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.

Concrete: Prepare the concrete by abrasive blasting, high pressure water cleaning, and/or approved mechanical method to achieve clean, sound, and profiled concrete. When logistics permit, prepare concrete in accordance with SSPC-SP 13/NACE No. 6. "Surface Preparation of Concrete."

Steel: Before preparing steel, please inspect and remove oil, grease, or other contaminants - "Solvent Cleaning" (SSPC-SP1) may be required. Abrasive blasting (or other approved mechanical methods) must be used in order to achieve a clean surface with a minimum profile of 3 mils. To prevent flash rusting, consider the use of an Epoxytec recommended holding primer.

Mixing

Add Part B to Part A and mix for a minimum of 4 minutes with a low speed 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; a special gelling agent and filler is incorporated to allow up to 0.5 inches @ 70F of fill and hang on vertical or overhead surfaces without sagging, and to achieve performance properties.



Application Method

CPP™ must be applied by trowel, spatula or other hand applied method. To control the thickness Epoxytec recommends utilizing a notch trowel via two different means:

- Option #1 - use a notch trowel first and let it cure; afterwards, return to fill the notches with a straight-edge trowel.
- Option #2 – use a notch trowel, then flatten the application to achieve uniformed thickness.

Kits are premeasured. Mix full kit in its entirety.

As an Adhesive: Apply to both bonding surfaces with spatula (putty-knife) or trowel. Join material. If necessary, clamp until cured. Strike off excess material.

As an Anchor/Dowel: Vertical and overhead. Partially fill drill hole with CPP™. It is permissible for the hole to be damp (remove excess water), however, the object must be dry. Work bolt in and out to compact the paste. Secure with templates. With object in position fill in remaining void.

As a Coat / Patch / Fill: Vertical and horizontal surfaces. Apply to area with trowel or spatula. Work in at maximum layer of 0.5 inches per coat. Minimum application thickness = N/A.

For potable water settings, apply between 30 -120 mils DFT.

Thinning

Do not thin Epoxytec CPP.

Storage & Handling

- Shelf life: 18 months, sealed.
- Storage: Store in a dry area away from direct sunlight. The material should be conditioned to between 70° F and 85° F before use.

Safety

Consult Material Safety Data Sheet (MSDS) for all material safety information.

Packaging & Color

- 2 Gallon Kit (pail)
- 1/2 Gallon Kit (tub)

Item# RC3-G2 (grey)
Item# RC3-K05 (grey)

Technical Properties

Finish		light coarse – alabaster (depending on application)
Mix Ratio		premeasured
Type		proprietary hybrid fiber-reinforced-polymer (epoxy/epoxide)
Potable Drinking Water	ANSI/NSF-61	NSF Certified
Solids by Volume	ASTM D2697	100%
Solvent (VOC)	ASTM D3960	none
Pot Life		30 min. (77F / 200 g mass)
Adhesion Strength (concrete, dry)	ASTM D4541 (mod) CIGMAT CT-2/3	substrate failure
Adhesion Strength (brick, wet)	CIGMAT CT-2/3	substrate failure
Adhesion Strength (steel)	ASTM D4541	1,500 psi
Water Absorption	ASTM D1653	< 0.1 g/sq.m.
Acid Exposure (pH 1, H ₂ SO ₄)	CIGMAT CT-1	passed
Tensile Strength	ASTM D638	8,900 psi
Flexural Modulus	ASTM D790	600,000 psi
Flexural Strength	ASTM D790	7,630 psi
Compressive Strength	ASTM D695	16,000 psi
Elongation	ASTM D2370	5.5%
Gel Time		6 hours (77F)
Complete Cure		18 hours (77F)
Temperature Exposure (dry)		5F - 160F
Temperature Exposure (wet)		32F - 160F
Recoat Time		when firm – no max.

** Epoxytec CPP™ passes ASTM D2512 / D4809-02863 test for Oxygen compatibility.*



Important! Although the technical details and recommendations contained in this data sheet correspond to the best of our knowledge and experience, all the above information must, in every case be taken as merely indicative and subject to confirmation after long-term practical applications; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product. The sole liability of Epoxytec for any claims out of the manufacturer's use of sale of its products shall be for the buyer's purchase price.