

PRODUCT DESCRIPTION

The CTech-LLC® Composite Protective Coatings (CPC™60) are chemical resistant coatings with high quality, high temperature, and abrasion resistance superior to other type epoxy resins. These tightly cross-linked system cures in the presence of moisture and humidity with excellent mechanical properties. They contain no solvents (100% solids, zero VOC) and has minimal odor and toxicity that assures ease of application. The high viscosity is well suited for vertical applications. This product is developed for bonding applications. CPC™60 composite protective coatings can be used as a final protective coating or as a fill-and-level undercoat over which the CTech-LLC® systems may be applied. These materials may be used either as a surface coating or a primer material.

ADVANTAGES

- Fine textured, sealed surface produces a tough, durable, chemical resistant, low maintenance overlayment.
- Compatible thermal coefficient of expansion provides long-term resistance to disbondment.
- Resists mechanical impact.
- Freeze/thaw resistant
- Resistant to strong acids/bases
- insensitive to Moisture
- Provides outstanding adhesion to damp concrete, a unique feature for concrete overlayments.
- Good high and low temperature properties
- Ambient cure
- 100% solvent-free
- Ideal for vertical and overhead repairs

USES

Composite protective coatings are suggested for use in application where protection of the composite systems against chemicals is necessary. These materials may also be used for a primer layer under the CTech-LLC® systems and they are formulated to “stay-in-place” such as may be required on vertical walls or overhead beams. These materials are also suitable for filling voids in concrete up to one half-inch depth resists against acid and Alkali Spill Areas and use in structural Support Columns, pump Bases and grouting.

SHELF LIFE

CPC™60 composite protective coatings can be stored for 24 months in original, unopened container with proper conditions.

STORAGE CONDITIONS

CPC™60 must be stored in a dry and cool place. Temperature should be between 4° to 32° C. Avoid freezing the product and keep them away from direct

sunlight, flame or other hazards.

EPOXY COMPONENT PROPERTIES

Color	Component A is white Component B is clear
Viscosity	Component A at 25° C is 7,000-10,000 cps Component B at 25° C is 11 cps
Pot Life	3 to 6 hours at 20° C
Viscosity of Mixed Product	Thick paste consistency

EPOXY MATERIAL PROPERTIES

PROPERTY	ASTM METHOD	TYPICAL TEST VALUE*
T _g Post Cure (24 hours)	-	60° C 82° C
Tensile Strength	D638 Type 1	43.7 MPa
Tensile Modulus	-	2.14 GPa
Elongation Percent	D638Type1	3.1%
Flexural Strength	D790	82.4 MPa
Flexural Modulus	D790	2.08 GPa

* Curing Schedule 72 hours post cure at 60° C.

MIXING

Epoxy compounds are usually supplied in two different containers. Before pouring the contents of component B into contents of component A, each part should be stirred separately to avoid deposit in container. Then one unit of “B” must be used with one unit of “A” material. Process of mixing should take 3-5 minutes with a low speed mixer. After mixing resin and hardener, you’ll have about 25-30 minutes time to apply the material. Clean mixing tools with a proper towel to reuse them.

HOW TO USE

SURFACE PREPARATION

For retrofitting applications, substrate preparation can highly effect on the quality of the performance of CFRP and GFRP composite systems.

- All the surfaces must be cleaned from dirt, grime, dust, curing compounds, oils, grease, waxes.
- New concrete must be cured for a minimum of 28 days
- Repair mortar must be used to repair all the eroded or damaged concrete surfaces.
- An industrial vacuum cleaner must be used to remove dust and dirt.
- All the surfaces need grinding, sandblasting, shot blasting, pressure wash or other common mechanical methods to reach an even concrete substrate.
- The sharp edges must be smooth and rounded to a minimum radius of 30 mm.
- Note that concrete surfaces must be fully dried or cured so adhesive can properly dry.

APPLICATION

C-Tech-LLC® systems may be applied with a brush, roller or trowel. Surface of all the contaminated elements must be cleaned thoroughly. Use care to apply an even coat over the entire surface. All vertical cracks must be pressure injected with a suitable injection system. CPC™ Coatings are compatible with all types of CTech-LLC® fabrics, primers and mortars. Mix part A and B together with a low speed mixer.

You can use saturators for impregnating fabrics or apply hand methods for some of the smaller projects. Using a roller can help to eliminate air bubbles in the resin and substrate, it can also ensure that there is a good bonding between them.

LIMITATIONS

Proper temperature for applying coatings is between 10° C to 40° C. Do not thin, solvents will prevent proper cure. For applying them must use adequate ventilation. They should not be used in cold and humid weather.

CAUTION!

All components of FRP composite systems may cause skin irritation and sensitization. Use of chemical resistant gloves is recommended.

Avoid breathing vapors and dust. Get medical attention if you are breathing with difficulty.

Resin products can cause strong eye irritation. Avoiding eye contact and using safety goggles is necessary.

SAFETY PRECAUTIONS

- Avoid eye contact.
- Do not allow resin contact with skin.
- Use safety gloves and glasses.
- Wear rubber boots and protective suits.
- Do not eat, drink or smoke when using the products.

If any symptoms happened, go to open air and get medical attention.

FIRST AID

If eye contact happened, Flush eyes with large amounts of water and obtain medical attention. In case of skin contact, wash your skin with soap and water and get medical attention if irritation persists. If there is cough or difficulty in breathing, go to open air and get medical attention if it persists.

CTech-LLC
 CYTEC's Composite Technology
 technical@ctech-llc.com
 info@ctech-llc.com
 www.CTech-LLC.com



IMPORTANT NOTE: Before using any CTech-LLC® product, the user must review the most recent version of the product's technical data sheet, material safety data sheet and other applicable documents, available at www.ctech-llc.com.

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Germany - Berlin CTech, LLC info@ctech-llc.com	USA - New York CTech USA, LLC info.usa@ctech-llc.com	China - Shenzhen CTech Shenzhen Co., Ltd info.china@ctech-llc.com	India - Surat CTech India Private Limited info.india@ctech-llc.com
Portugal - Lisboa CTech Portugal, Unipessoal Lda info.portugal@ctech-llc.com	South Africa - Paarl CTech South Africa (PTY) Ltd info.rsa@ctech-llc.com	Brazil - Indaiatuba CTech Tecidos Brasil Ltda info.brasil@ctech-llc.com	China - Shenzhen CTech Shenzhen Co., Ltd info.china@ctech-llc.com