



CE700 HPC Patching

HYBRID POLYMER CONCRETE

DESCRIPTION

FasTrac CE700 HPC Patching is an three-component hybrid polymer concrete system containing engineered polymer resins and specially selected aggregates. When properly mixed, the reacted chemistry produces a durable polymer concrete composite designed for bridge deck overlays, patching, resurfacing applications and grade corrections. Specifically designed to resurface and restore prepared concrete surfaces from 1/2" to 12" in one application lift. The system can be utilized for variable depth cross sections.

USE

- Bridge deck resurfacing
- Concrete repair
- Grade correction
- Elevated parking structure overlays

FEATURES

- Strong like concrete, flexible like asphalt
- Rapid return to traffic – as little as 2 hours
- Impermeability provides excellent protection against chloride intrusion increasing structure life
- High abrasion resistance
- Low modulus formula produces less stress on the substrate
- Excellent thermal compatibility
- No volatile chemical odors, zero VOC.
- Durable in extreme climatic conditions
- Self-priming, no primer required
- Freshly placed system can be tined to produce a traction profile
- Optional friction aggregate surface can be added for increased traffic safety

PACKAGING AND YIELD

CE700 HPC Patching Kit

0.5 cu. ft.: 0.5 gallon Part A / 0.5 gallon Part B—liquid / 50 lb. Part C - Aggregate

1.0 cu. ft.:

1.0 gallon Part A - liquid / 1.0 gallon Part B - liquid / 2 – 50 lb. bags Part C – aggregate

5.0 cu. ft.:

5.0 gallons Part A – liquid (pail) / 5.0 gallons Part B – liquid (pail) / 10 – 50 lb. bags Part C – aggregate

CE700 HPC Overlay

Volumetric Mixing (per ~1.0 cu. yd.):

50 gallons liquid (25 gallons Part A, 25 gallons Part B)
3000 lb. Part C—aggregate

PHYSICAL PROPERTIES

Shelf Life: 2 years in original unopened containers

Storage Conditions: 40°F-95°F (5°C-35°C)

Conditioning: 65°F-90°F (18°C-32°C)

Mix Ratio (polymer): 1:1 by volume

Viscosity (polymer): 900 - 1500 cP

Gel Time (60g polymer): 15 minutes

Set-to-Touch Time (ASTM D1640, 73°F/23°C): 3 hours

Tensile Strength (ASTM D638): 2,000 - 2,500 psi (17.2 MPa)

Tensile Elongation (ASTM D638): >50%

Bond Strength (ASTM C1583/ACI 503r): >250 psi (1.7 MPa),
100% substrate failure

Compressive Strength (ASTM C579) >5,000 psi (34.5 MPa)

Shrinkage (ASTM C531, 7 days): 0.01%

Thermal Compatibility (ASTM C884): Pass

Absorption (ASTM D570) polymer only, 24 hours: 0.2%

Chloride Ion Permeability (AASHTO T277): 0.0 coulombs

CURING TIME*

Temperature (°F): 60 65 70 75 80 85 90 95

Standard (hrs): 5 4 3.5 3 2 1.5 1 0.5

W/Accelerator (hrs) 4 3 2.5 2 1.5

*Cure time based on mixed and placed material temperature. Sunlight, as well as substrate and ambient temperatures will also affect cure time.

APPLICATION

SURFACE PREPARATION:

Prepare surface in accordance with ICRI Technical Guideline No. 03732. Surface must be clean and sound. Surface must be free of standing water. Remove curing compounds, laitance, grease, rubber and any foreign matter. For best results, shot blasting, sand-blasting and scarifying are the preferred methods of preparation. Prepared surface should have a concrete surface profile of ICRI CSP 5-7. Remove rust from exposed reinforcing steel. Have all necessary equipment near area to permit rapid and continuous placement. Remove all unsound concrete and establish a sound concrete foundation.

Patch Kit

MIXING: Mix only the amount of material that can be used within its pot life. Proportion each liquid component (Part A and Part B) carefully into a clean pail. Mix thoroughly for 3 minutes with a Jiffy mixer on low speed (400-600rpm). Scrape the sides and bottom of the container. To prepare the repair mortar, slowly add the Part C aggregate to the mixed polymer to achieve desired consistency and mix only until all aggregate is wetted out.

Use FASTRAC CE700 HPC Patching liquid polymer as a primer when necessary.

Overlay

Place FASTRAC CE700 HPC Patching with a vibratory strike off screed or slipform paver as appropriate for the application. Standard hand tools can be used for small repairs. FASTRAC CE700 HPC Patching can be finished to the desired surface profile.

When using optional friction aggregate, broadcast aggregate and lightly float or roll it into freshly placed FASTRAC CE700 HPC Patching.

LIMITATIONS

Minimum substrate temperature is 50°F (10°C). Do not thin. Solvents will prevent proper cure. Cured material is a vapor barrier.

CLEAN UP

Collect with absorbent material. Flush area with water. Dispose of in accordance with local, state and federal disposal



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regulations. Uncured material can be removed with Natural Clean or other approved solvent. Cured material can only be removed mechanically.

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MANUFACTURER

Cornerstone Construction Material, LLC
1150 SE Hamblen Rd.
Lee's Summit, MO 64081
816-380-1082
www.ccmaterial.com