



## CE700 HPC

### HYBRID POLYMER CONCRETE

#### ITEM NUMBER CE700

#### DESCRIPTION

CE700 HPC is a three-component system containing the finest hybrid based polymer resins and blends of speciality selected aggregates. When properly mixed, the reacted chemistry produces a highly engineered polymer concrete composite designed for bridge deck overlays, patching, and resurfacing applications. Specifically designed to resurface and restore prepared concrete surfaces from ½" to 12" in one application lift. The system can be utilized for variable depth cross sections. Return to traffic within 3 hours.

#### WHERE TO USE

- Resurface bridge decks
- Elevated parking decks
- High precision concrete repair

#### ADVANTAGES

- High strength system provides excellent protection against chloride intrusion
- Rapid return to traffic – less than 3 hours
- Impermeability provides for excellent bridge preservation
- High abrasion resistance
- Lower modulus formula produces less stress on the substrate
- 24/7 technical support from experienced technicians
- No volatile chemicals odors. Zero VOC.
- All components blend easily together producing a high traction resistant finish
- Durable performance in extreme climatic conditions
- High tensile and flexural strength
- Exceptional composite bond strength: Primer application is optional
- Freshly placed system can be tined to produce a tractioned profile
- No explosive catalyst required to activate mix design
- Low viscosity for fast and efficient mixing and finishing
- Rapid strength gain and curing features
- Made in the USA

#### COVERAGE

4-gallon liquid with 300 lb. aggregate will yield 2.5 cu. ft. Yield: 30 sq. ft. @ 1 " thick.

#### PACKAGING

##### **Liquid Polymers**

- 2 gal / 7.6 L units
- 10 gal / 38 L units
- 100 gal / 208 L units
- 500 gal / 950 L units

##### **Blended Aggregate**

- 50 lb. bags
- 2500 lb. bulk bags

##### **Repair Unit: 1.25 cu. ft. kit:**

- 1.0 gallon Part A - liquid / 1.0 gallon Part B - liquid / 3 – 50 lb. bags Part C – aggregate

##### **Standard Unit: 5.0 cu. ft. kit:**

- 4.0 gallon Part A – liquid (pail) / 4.0 gallon Part B – liquid (pail) / 12 – 50 lb. bags Part C – aggregate

##### **Precision Unit: 2.3 cu. yds. kit:**

- 50 gallon Part A – liquid (drum) / 50 gallon Part B – liquid (drum) / 3 – 2500 lb.( bulk bag) Part C -aggregate

##### **DOT Unit: 11.5 cu. yds. kit:**

- 250 gallon Part A – liquid (tote) / 250 gallon Part B – liquid (tote) / 15 – 2500 lb.( bulk bag) Part C -aggregate



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## TECHNICAL DATA

Shelf Life:	2 years in original unopened container.
Condition material to:	65°F – 85°F (18°C – 29°C) before using.
Mix Ratio (Polymer)	1:1 by volume
Mix Ratio (Polymer with aggregate)	4-gallon mixed polymer to 300 Lb aggregate
Viscosity (Polymer)	1,200 cps @ 77°F
Gel Time (60 g Polymer)	20 minutes
Tack Free Time (73°F)	3 hours
Tensile Properties (Polymer only, ASTM D638), 7 day cure Tensile Strength: Tensile Elongation:	2,000 psi (13.8 MPa) 40%
Slant Shear Bond Strength (ASTM C882)  2 day cure: 14 day cure:	1,500 psi (10.3 MPa) 2,000 psi (13.8 MPa)
Compressive Strength (ASTM C579)  3 hour cure: 24 hour cure:	1,200 psi (8.3 MPa) 5,000 psi (34.5 MPa)
Bond Strength (ASTM C1583/ACI 503R)	500 psi (3.4 MPa), 100% substrate failure
Flexural Strength (ASTM D790)	3,000 psi (23.4 MPa)
Shrinkage on Cure (ASTM D2566)	0.2%
Thermal Compatibility (ASTM C884)	Pass
Water Absorption (Binder only, ASTM D570)	0.2% (24 hr)
Chloride Ion Permeability (AASHTO T277)	0.0 coulomb

## MINIMUM CURING TIME:

TEMPERATURE (°F)	60	65	70	75	80
MINIMUM CURING TIME (HRS)	5	4	3.5	3	2

## 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 or unsound surface. For best results, shot blasting, sandblasting and scarifying are the preferred methods of preparation. ( ¼" – CSP 5, 6 or 7). Remove rust from exposed reinforcing steel. Have all necessary equipment near area to permit rapid and continuous placement. All bagged aggregates and liquid resins should be stored in a clean, cool, dry environment. Remove all unsound concrete and establish a sound concrete foundation.

MIXING: Preferred method is to use automated installation equipment. When mixed and applied manually, mix only the amount of material that can be used within its pot life. Proportion each liquid component 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 a repair mortar, slowly add 300 lbs. of the engineered aggregate to every 4-gal of mixed epoxy. Mix only until all aggregate is wetted out. Volumetric mixers may be utilized to increase production or the FasTrac 750 Concrete Mixer.

INSTALLATION and FINISHING: use CE700 HPC liquid polymer part only as a primer when necessary. Place CE700 HPC with a vibratory strike off screed. Standard hand tools can also be used for small patches. CE700 HPC can be finished to the designed roughness. Broadcast aggregate and lightly roll it into CE700 HPC to further improve friction.

## LIMITATIONS

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



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### **CLEAN UP**

Collect with absorbent material. Flush area with water. Dispose of in accordance with local, state and federal disposal regulations. Uncured material can be removed with CE Clean or approved solvent. Cured material can only be removed mechanically.

### **HANDLING PRECAUTIONS**

Refer to the Safety Data Sheet for FasTrac CE700 HPC before using.

### **WARRANTY**

#### **LIMITED WARRANTY**

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