



CE700 EPC

HYBRID POLYMER CONCRETE

ITEM NUMBER CE700

DESCRIPTION

CE700 EPC is an three-component system containing the finest hybrid polymer resins and blends of speciality selected coarse 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 1/2" 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 in extreme climatic conditions
- High tensile and flexural strength
- Made in the USA
- Exceptional composite bond strength: Primer application is optional
- Freshly placed system can be tyned 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

COVERAGE

4-gallon liquid polymer with 300 lbs. 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 / 378 L units
- 500 gal / 1892 L units

Blended Aggregate

- 50 lb. / 23 kg bags
- 2500 lb./ 1134 kg super sacks

▪ **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: 11.6 cu. yds. kit:**

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

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:	2,800 psi (19.3 MPa) 40%
Slant Shear Bond Strength (ASTM C882) 2 day cure: 14 day cure:	2,000 psi (13.8 MPa) 2,800 psi (19.3 MPa)
Compressive Strength (ASTM C579) 3 hour cure: 24 hour cure:	1,500 psi (10.3 MPa) 5,000 psi (34.5 MPa)
Bond Strength (ASTM C1583/ACI 503R)	300 psi (2.0 MPa), 100% substrate failure
Flexural Strength (ASTM D790)	3,400 psi (23.4 MPa)
Shrinkage on Cure (ASTM D2566)	0.2%
Thermal Compatibility (ASTM C884)	Pass
Water Absorption (Polymer 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 mix and apply 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 an repair mortar, slowly add 300 lbs. of the engineered aggregate to every 4-gal of mixed polymer. Mix only until all aggregate is wetted out. Volumetric mixers may be utilized to increase production.

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

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 Natural Clean or approved solvent. Cured material can only be removed mechanically.



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HANDLING PRECAUTIONS

Refer to the Safety Data Sheet for CE700 EPC before using.

WARRANTY

LIMITED WARRANTY

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