

# CrownWear™ 20 EPC - LTC

## Product Description Sheet No. 202

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### EPOXY POLYMER CONCRETE FOR PATCHING, GROUTING REGRADING SURFACES AND OVERLAYMENTS – LOW TEMPERATURE CURING

#### Description

**CrownWear 20 EPC - LTC** Product No. 202 is a 100% Solids, 100% Reactive, moisture-insensitive, non-shrink, 3 component, Epoxy Polymer Concrete formulated in different consistencies to be a self leveling grout, packable patch or a trowel down overlay material.

#### Advantages

- Applicable / Curable to 20°F as thin overlays
- Applicable / Curable below 0°F as a Patch or Grout
- factory Approved Formula's Self Leveling, Packable, Hand & Machine Trowelable
- Excellent Working Time
- Adheres to Damp Surfaces
- Fast Cure Rate
- Excellent Strength Properties
- High Compressive Strength
- High Vibration Resistance
- Superior Abrasion Properties
- Easy to Place

#### Where to Use

Use as a binder for Epoxy Polymer Concrete for:

- Shallow, Partial & Full Depth Patching
- Wide Void Grouting
- Kurf Filling
- Regrading Surfaces
- Thin Overlayments

#### Coverage

Yield is dependent on formula consistency and aggregate size.

#### Packaging

4 - 1 Gallon Units / Case – 5 Gallon Pail  
½ ft<sup>3</sup> Pre-Portioned Kits (Epoxy and Sand)

#### Typical Data for CrownWear 40 EPC

(Material and Curing Conditions at 73°F unless noted, 50% R.H.)

**COLOR** Straw or Pigmented      **POTLIFE** 7 - 35 minutes

**EPC CONSISTENCY** Flowable, Packable or Trowable

**VISCOSITY** 350-550 cps

#### TACK-FREE TIME

Substrate Temperature	20°F *	73°F	90°F
	1 - 4 hrs.	1 - 4 hrs.	1 - 2 hrs.

#### TENSILE PROPERTIES (ASTM D 638) 5 Days

Tensile Strength	8,000 psi
Elongation at Break	5 to 9 %
Modulus of Elasticity	3.9 X 10 <sup>6</sup>

#### FLEXURAL PROPERTIES (ASTM D 790) 5 Days

Flexural Strength	4,700 psi
Tangent Modulus of Elasticity	4.2 X 10 <sup>5</sup>

#### SLANT SHEAR STRENGTH (ASTM C 882) 5 Days

Test Temperature	Value	Mode of Failure
90°F	5,150 psi	100% Concrete Failure
20°F	4,900 psi	100% Concrete Failure

#### COMPRESSIVE STRENGTH (ASTM C 579)

	20°F *	40°F*	73°F
2 hour	1,000 psi	3,400 psi	7,200 psi
4 hour	3,400 psi	5,900 psi	9,000 psi
8 hour	5,300 psi	8,100 psi	11,500 psi
1 day	11,200 psi	11,300 psi	12,100 psi
7 days	12,100 psi	12,100 psi	12,100 psi

- Pre-conditioned epoxy to 90°F before mixing

#### COEFFICIENT OF THERMAL EXPANSION (ASTM D 696)

Temperature Range -30°C (-22°F) / 30°C (86°F)  
7 days 14.0 to 17.0 X 10<sup>-6</sup> in. / in./°F

**COMPLIANCE** ASTM C 881 – Type 1,3,4 Grades 1  
Classes A,B,C

**SHELF LIFE** 2 years in original unopened containers

# CrownWear 20 EPC-LTC, an Epoxy Polymer Concrete for Concrete Repairs

## Surface Preparation

Concrete and other substrates must be clean, sound, and free of standing water. Remove dust, grease, waxes, coatings, curing compounds and all contaminants by mechanical means such as bush hammering and/or abrasive blasting. Abrasive blast all metal surfaces to white metal for best adhesion. Apply EPC before flash rusting develops or the cleaned concrete becomes contaminated.

## Test Substrate for Adhesion

Before placement of the Epoxy Polymer Concrete, check the concrete and steel substrates for soundness and cleanliness with a Tensile Pull Test (ACI 503 R) or Shear Test. 100% concrete must fail to pass either test.

## Preconditioning Epoxy

When temperatures drop, it becomes harder to flow the grout as when the temperatures are warmer. To improve the flowability and speed of cure at lower temperatures preheat each epoxy component to 90°F before mixing. Caution the pot life will be reduced by about 50%.

## Mixing

Pre-mix Component "A", (when pigmented) then pour Component "B" into "A" and mix for 90 seconds with a low speed paddle attached to a drill (400-600 rpm). Pour the mixed epoxy into a clean 5 gal pail and slowly add the aggregate and mix until uniformly blended, about 4 minutes. For larger batches pour the mixed epoxy into a concrete mixer, add the aggregate into the mixer, and blend for about the same amount of time.

**Note:** When a mixer is used, on the first batch reduce 5-10 lbs. of aggregate to allow the mixer drum surface to wet out. Be sure the mixing vessel is clean and dry.

## Priming

Mixes that are designed to prime the surface as part of the placement process do not require priming prior to EPC placement. EPC formula's that are not designed to self-prime must be primed before placement of the EPC. The prime coat of Neat Epoxy (no aggregate added to the mixed epoxy) must be tacky during placement of the EPC.

## Placement

Pour the mixed EPC onto the surface, spread evenly and compact to help eliminate air entrapment. Screed or trowel to create the desired surface profile. Mechanical compact is required as part of the placement of larger aggregate filled patching EPC mixes.

## Limitations

- Minimum substrate and ambient
- Temperature is 20°F for thin overlays.
- DO NOT THIN - solvents will prevent proper cure.
- Maximum Patch Depth is six (6) inches per lift. It is not necessary to wait for each lift to become tack-free. Compact each lift and immediately place next lift.
- Cold temperature Grouting applications may require roding, and pushing during placement.
- For proper seating, allow grout head to rise above highest area of ceiling contact.
- Keep aggregate dry.
- Pre-condition epoxy as needed.

**FOR INDUSTRIAL USE ONLY**  
**KEEP OUT OF REACH OF CHILDREN**  
**KEEP CONTAINERS TIGHTLY CLOSED**

## Caution

**Before Using Read Material Safety Data Sheets.**

### Component "A" - Irritant

Contains epoxy resins. Prolonged contact with skin may cause irritation. Avoid contact with eyes.

### Component "B" - Corrosive

Contains aliphatic/cycloaliphatic amines. Contact with skin may cause severe burns. Avoid eye contact. Product is a strong sensitizer

**Component "C" - Contains silica.**  
Avoid breathing product.

## Important Information

Use of safety goggles, chemical-resistant gloves, adequate ventilation and NIOSH/OSHA approved respirator is recommended.

## Clean Up

In case of spills wear suitable protective equipment, contain spill, and collect with absorbent material, place in suitable container. Ventilate area. Avoid contact. Dispose according to applicable local, state, and federal regulations.

## First Aid

In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes. For respiratory problems, remove person to fresh air. Contact Physician Immediately. Wash clothing before re-use.

*Consult Material Safety Data Sheet for More Information*

LIMITED WARRANTY - "Crown Polymers, LLC warrants its products to be free of manufacturing defects, to be of good quality, and that they will meet Crown Polymers current published physical properties when applied in accordance with Crown Polymers written directions and tested in accordance with ACI, ASTM and Crown Polymers Standards. Product proved to be defective will be replaced. There are no other warranties by Crown Polymers, LLC of any nature whatsoever, expressed or implied, including any warranty of merchantability or fitness for a particular purpose in connection with this product. Crown Polymers, LLC shall not be liable for damages of any sort, including remote or consequential damages, resulting from any claimed breach of any warranty, whether expressed or implied, from any other cause whatsoever. Crown Polymers will not be responsible for use of this product in a manner to infringe on any patent held by others."

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