

# Conpro One Shot

## Division 3: Concrete

Single component, polymer modified,  
Portland cement for horizontal resurfacing applications up to 1/2 inch.  
Can be extended with 3/8 inch aggregate.

### SECTION 030130 – MAINTENANCE OF CAST IN PLACE CONCRETE

#### PART 1 GENERAL

##### 1.1 SUMMARY

Provide labor, materials, equipment and supervision necessary to complete the application of product to the prepared substrate.

##### 1.2 SYSTEM DESCRIPTION

The products shall meet or exceed the following performance requirements:

Base		Portland cement			
pH	Wet mix	greater than 12			
Aggregate type		Sharp quartz silica			
Density	Wet mix	110 pounds per cubic feet			
Setting time by vicat needle	ASTM C191	Initial 200 minutes - Final 245 minutes			
Percent air by volumetric	ASTM C173	6 percent			
Resistance to deicing chemicals under freeze/thaw	ASTM C672	50 cycles – 0 rating – no effect			
Length change	ASTM C157	<1000 $\mu$ strains at 28 days–air cure < 500 $\mu$ strains at 28 days–wet cure			
Slant shear bond strength-epoxy	ASTM C882	1500 psi without slurry coat 2000 psi with slurry coat			
Compressive strength-psi	ASTM C109	1 Day    7 Days    14 Days    28 Days			
Flexural strength	ASTM C78	1740    4500			5000
3 point loading– psi					1010
Tensile strength-psi	ASTM C307	600    640    740			

##### 1.3 SUBMITTALS

- A. Manufacturer’s current product data bulletin.
- B. The trained applicator shall prepare a test area on the structure as a submittal for approval of proper application and adhesion.
- C. The trained applicator shall submit to the specifier a list of five projects that he has completed within the last five years, exhibiting the applicator’s skills. The list shall include project name, location, and description of work and completion date.

##### 1.4 QUALITY ASSURANCE

Products shall be installed by a trained applicator with a minimum of five years’ experience and meet the requirements of the specifier.

## 1.5 DELIVERY, STORAGE & HANDLING

- A. Deliver all products in original labeled, sealed, and undamaged containers.
- B. Store all products in accordance with manufacturer's printed instructions.
- C. Handle products in accordance with manufacturer's printed instructions.

## 1.6 PROJECT/SITE CONDITIONS

- A. All products shall be applied at substrate and ambient temperatures of 40 degrees F or above.
- B. A minimum ambient and substrate temperature of 40 degrees F shall be maintained 24 hours after completion of work.
- C. Protect application from precipitation and high wind for a period of 8 hours after installation.
- D. Do not apply products to frozen surfaces.

## 1.7 SCHEDULING

The work requires close coordination with related sections and trades.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

The following manufacturers are approved for the project.  
Conproco

### 2.2 MATERIALS

Conpro One Shot: A trowel applied resurfacing cement for horizontal applications up to 1/2 inch. It can be extended with 3/8 inch aggregate.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Installation shall be performed strictly in accordance with manufacturer's current product data bulletin.
- B. Examine substrates and conditions under which materials will be installed. Do not proceed with installation until unsatisfactory conditions are corrected.
- C. Coordinate installation with adjacent work to ensure proper sequence of construction. Protect adjacent areas and landscaping from contact due to mixing, handling, and application of materials.

### 3.2 SURFACE PREPARATION

- A. Remove loose and deteriorated material, laitance, dirt, dust, oil and any surface contaminants that will inhibit proper bond.

- B. Saw cut edges with a diamond blade at a 90° angle to eliminate feather edging. Avoid polishing the edges, as this will inhibit bond.
- C. Remove a minimum 1/16-inch of surface to achieve Concrete Surface Profile 5 by abrasive blasting, steel shotblasting, scarifying, needle-scaling or high pressure water.
- D. Avoid bruising or micro cracking during surface preparation. Refer to ICRI Surface Preparation Guide 03732.
- E. Repair zone must be a minimum of 1/8 inch deep, of simple geometry, with no complex edge conditions.
- F. Avoid long narrow repairs; these have a greater tendency to crack.
- G. Apply Conpro Start where a consolidant is of benefit (soft, powdery surfaces).
- H. Remove concrete from corroded steel and several inches beyond to expose non-corroded steel.
- I. Provide a 3/4-inch clearance between the concrete and steel.
- J. Damaged reinforcing steel should be inspected by a qualified engineer and appropriate action taken.

### 3.3 APPLICATION

#### A. Priming

##### 1. Concrete:

- a. Use Conpro Primer, as a bonding primer. Refer to the individual product technical data bulletin for information.
- b. Alternatively, saturate surface with clean water, but with no standing water and then prime the prepared substrate including all edges with a slurry coat of Conpro One Shot. Work the slurry into the substrate to ensure intimate contact and establish bond. The repair material must be applied while slurry is wet. If the slurry dries, remove and recoat.

##### 2. Reinforcing Steel:

- a. Remove all scaling rust from reinforcing steel.
- b. Apply ECB anti-corrosion coating.

#### B. Mixing

- 1. Mechanically mix using a low speed drill (400 - 600 rpm) and mixing paddle or mortar mixer.
- 2. Pour 3 quarts of potable water into a clean mixing vessel and slowly add all of the powder.
- 3. Mix continuously for 3 minutes to a uniform, lump-free consistency.
- 4. Add up to 1 pint of additional water if needed.
- 5. Allow to breathe for 1 minute and remix for 1 minute to improve workability.

6. Do not overmix, this will entrain excess air.

#### C. Application

1. Follow instructions for Priming.
2. Trowel in key coat.
3. Double back applying material necessary to complete application.
4. Apply with a motion similar to placing concrete.
5. Form applications must be consolidated with vibrator.
6. Finish with a magnesium float or trowel.
7. Do not overwork the finish.
8. For applications over 1/2 inch add up to 30 pounds of 3/8-inch aggregate. Aggregate must be non-reactive, low absorption, graded and high density.

#### D. Curing

1. Dampen the repair with a fine mist of water for 24 hours or moist cure with wet burlap and polyethylene. Alternatively, apply ProMasonry Cure & Seal.
2. Protect repair from direct sunlight, wind, rain and frost during curing period.

### 3.4 CLEANING

- A. Material left over at the job site by the approved applicator shall be removed.
- B. Clean tools and equipment with water immediately after use.
- C. Cured material must be removed mechanically.

END OF SECTION 030130