

Conpro Super Seal

Division 7: Thermal and Moisture Protection

A two-part, cementitious capillary/crystalline waterproofing for concrete structures.

SECTION 071616 – CRYSTALLINE WATERPROOFING

PART 1 GENERAL

1.1 SUMMARY

Provide labor, materials, equipment and supervision necessary to complete the application of repair mortar to vertical and overhead surfaces.

1.2 SYSTEM DESCRIPTION

The products shall meet or exceed the following performance requirements:

pH	Wet mix	Greater than 12		
Liquid/cement ratio		0.45		
Density	Wet mix	93 pounds per cubic feet		
Density	Hardened	100 pounds per cubic feet		
Pot life		20 to 40 minutes		
Durometer hardness	ASTM D2240	80 to 85		
Water penetration and leakage	ASTM E514	100 percent reduction in leakage		
Resistance to hydrostatic pressure	CRD-48-73	57 feet – 2 coats		
Concrete block		103 feet – 3 coats		
Compressive strength – psi	ASTM C109	5775	14 Days 6125	28 Days 6350
Tensile strength – psi	ASTM C307	230	420	450

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 45 degrees F or above.
- B. A minimum temperature of 45 degrees F shall be maintained 24 hours after completion of work.
- C. Protect products from precipitation and high winds for a period of 8 hours after installation.
- D. Do not apply products to frozen surfaces.
- E. Do not apply over active leaks.

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 Super Seal: A two-part, cementitious/capillary waterproofing for concrete and masonry walls.

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. Prior to application of the waterproofing slurry, remove any dirt, debris, grease, oil or other surface contaminants that will inhibit bond.
- B. Grind or abrasive blast (Concrete Surface Profile 3) to achieve an open-pored surface. This is essential to allow the crystalline structure to grow into the cement capillaries. Refer to ICRI Surface Preparation Guide 03732 for information about Concrete Surface Profile.

- C. Stop active leaks with ProMasonry Hydraulic Plug.
- D. Saturate with clean water, (saturated surface dry/SSD). Wall should be wet when Conpro Super Seal is applied.

3.3 APPLICATION

A. Mixing

1. Shake bottle of the Super Seal Admix until contents are uniformly mixed. Put the Super Seal Admix in a mixing vessel and mix with five quarts of water.
2. While mixing, slowly add entire Super Seal bag contents to the water/admix solution. Mix at low speed for three minutes. Scrape sides and add up to 2 pints of additional water as needed to achieve a slurry-like consistency.
3. Allow to breathe for 1 minute then remix for 1 additional minute.
4. Do not overmix, as this will entrain excess air.
5. Do not retemper.

B. Application

1. Walls:
 - a. Protect all adjacent surfaces. Dampen wall surface with water just prior to applying the Super Seal.
 - b. Clean and pre-stripe non structural cracks (up to 1/16 inch wide) with one 4 inch wide, 50 mils. application of material.
 - c. Dynamic cracks, joints and transitions (wall to slab) must be properly detailed with a closed cell backer rod and polyurethane sealant.
 - d. Apply a 4 to 6 inch wide stripe of material over cured sealant. Embed mesh fabric while material is still plastic.
 - e. Using a stiff masonry brush (tampico fiber) or sprayer, apply the Super Seal evenly at a rate of 50 mils.
 - f. Work the first coat into the substrate using a circular pattern or figure 8 pattern to fill all voids and pores.
 - g. Do not exceed 60 mils. per coat.
 - h. Apply a second coat once the first coat is thumb-print hard.
 - i. For trowel applied applications, reduce the water demand to achieve a mortar-like consistency.
 - j. Keep brush clean and free from buildup.

2. New concrete slabs:
 - a. Broadcast Conpro Super Seal powder in 2 passes at 90 degree to each other to ensure uniform coverage of 2 1/4 to 2 1/2 pounds per yard (1/4 pound per foot) during the floating process.
 - b. Mix 1 part Conpro Super Seal Admix with 1 part water.
 - c. Apply liquid mixture uniformly with a low pressure sprayer.
 - d. Finish as specified for concrete finishing.

C. Curing

1. Walls:
 - a. Mist cure 3 to 4 times per day for 3 days or moist cure with wet burlap and polyethylene for 3 days.
 - b. Protect repair from direct sunlight, wind, rain and frost during the curing period.
2. New concrete slabs:
 - a. Dampen with a fine mist of water for 24 hours or moist cure with wet burlap and polyethylene. Alternatively, apply ProMasonry Cure & Seal.
 - b. Protect repair from direct sunlight, wind, rain and frost during the curing period.

3.4 CLEANING

- A. Material left over at the job site shall be removed by the approved applicator.
- B. Equipment and adjacent surfaces shall be cleaned with water immediately after application.
- C. Cured material must be removed mechanically.

END OF SECTION 071616