

Conpro One Coat & Stucco

Division 9: Finishes

Polymer-modified, fiber reinforced, cement based mortar, stucco or render that combines the scratch and brown coat in one application. Finished with traditional, Portland cement-based stucco.

SECTION 092400 – CEMENT PLASTERING

PART 1 GENERAL

1.1 SUMMARY

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

1.2 SYSTEM DESCRIPTION

The products shall meet or exceed the following performance requirements:

Scratch and brown coat:

Base		Portland cement		
Ph	Wet mix	>12		
Dry bulk density	ASTM C188	66 pounds per cubic feet		
		7 Days	14 Days	28 Days
Compressive strength - psi	ASTM C109	1600	1900	2250
Tensile strength - psi	ASTM C307	280	350	420

Stucco:

Base		Portland cement		
Ph	Wet mix	>12		
Density	Wet mix	110 pounds per cubic feet		
Setting time by vicat needle	ASTM C191	Initial 60 minutes – Final 285 minutes		
Percent air by volumetric	ASMT C173	5 to 7 percent		
		7 Days	14 Days	28 Days
Compressive strength - psi	ASTM C109	2400		3000
Tensile strength - psi	ASTM C307	300	395	460

Acrylic admixture:

Base		Aqueous		
Polymer		100 percent acrylic		
pH		>8		
Density of liquid coatings	ASTM D1475	8.4 pounds per gallon		
Results typical for 3/4 - 3 inch mix		7 Days	14 Days	28 Days
Compressive strength	ASTM C109			
Design mix without admixture - psi		2725	3375	3725
Design mix with admixture - psi		3400	4150	4700
Percent increase - percent		25	23	26
Tensile strength	ASTM C307			
Design mix without admixture – psi		95	360	360
Design mix with admixture – psi		385	390	400
Percent increase – percent		30	8	11

Specifiers Note: If a colored acrylic admixture is used, specifier may choose whether or not to use the acrylic stain finish coating below. If acrylic stain will be applied, it should be the same color as the colored acrylic admixture. Delete acrylic stain if not applicable.

Acrylic stain:

Base		Aqueous
Polymer		100 percent acrylic
pH		8.7
Percent solids by weight		35 percent
Percent solids by volume		31 percent
Viscosity	ASTM D562	81 KU – paint paddle
Volatile organic content - VOC	ASTM D3960	Less than 0.32 pounds per gallon 38 grams per liter
Density of liquid coatings	ASTM D1475	9.64 pounds per gallon
Drying time		2 hours at 65 degrees F – dry to touch
Water vapor transmission	ASTM D1653 wet cup	12 perms – 1 coat at 5 mils.
Fungus resistance	Fed. Spec. TT-P-19D	Pass – no growth
Accelerated weathering – QUV	ASTM G154	2000 hours – UV-B cycled with condensation – no effect Dried ketchup/dried coffee/dried soda – excellent
Resistance to chemicals	ASTM C1308	Gas/Motor oil - excellent
Wind driven rain	Fed. Spec TT-C-555B	No leakage at 62 miles per hour – 2 coats
Water penetration and leakage	ASTM E514	100 percent reduction – 2 coats
Resistance to abrasion – tabor	ASTM C1353	250 cycles – 2.8 percent loss – H22 wheel with 500 grams
Freeze/thaw stability	ASTM C932	Pass
Heat stability	ASTM C932	Pass – 2 weeks at 120 degrees F
Dirt pick-up	ASTM D3719	Excellent
Mud cracking at 15 mils.		None

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, color and texture.
- 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 ambient and substrate temperature of 45 degrees F shall be maintained 24 hours after completion of work.
- C. Protect products from precipitation, high wind and frost for a period of 24 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

- A. Trim Accessories (if necessary): Expansion joints, corner beads and casing beads shall be rigid PVC exterior grade as manufactured by Plastic Components, Inc., Miami, FL, or 100 percent zinc components as manufactured by Keene Corp., Parkersburg, WV.
- B. K-88 Admix: An acrylic admixture designed to enhance the performance of Portland cement-based products.

Specifiers Note: Insert the following product for a colored stucco system and delete the above product.

- C. Color K-88 Admix: Acrylic admixture (integrally colored) designed to enhance the performance of Portland cement based products.
- D. Conpro One Coat: Polymer-modified, fiber reinforced, cement based concentrate that combines the scratch and brown coat in one application.
- E. Conpro Stucco: Durable, traditional, Portland cement-based, pre-blended stucco finish.
Color: _____
- F. Sealant: A one or two part polyurethane sealant as manufactured by _____.

Specifiers Note: Insert the following product for an alternate method for a colored stucco system. The option is to choose Super Color Stain in the same color as Color K-88 Admix or to delete Color K-88 Admix.

G. Super Color Stain: A water based, opaque, acrylic stain for vertical surfaces.

Color: _____

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

Prior to application of the products, inspect the substrate for proper cleaning and treatment of structural cracks, texture differences, damage, etc. Work shall not proceed until unsatisfactory conditions are corrected.

3.3 APPLICATION

A. Flashing:

Install flashing around all window and door openings and wall penetrations according to manufacturer's recommendations.

B. Trim Accessories:

1. Joint and trim accessories shall be mechanically attached to the substrate.
2. Attach Stop Bead to top of walls, adjacent to windows and other openings. Set at a distance of 3/8 to 1/2 inches away from the opening to create a space for caulk joint.
3. Expansion Joints shall be installed so that no panel is over 144 square feet. The length to width ratio must not exceed 2.5 to 1.
4. Install Expansion and Control Joints so that all vertical joints are continuous. At intersections the vertical joint shall be continued.
5. At joints in the trim, butt the joints. Do not overlap.
6. All accessory butt joints shall be set in a silicone sealant.

C. Metal Reinforcing:

1. Cut the metal lath to full panel lengths; overlap the flanges of trim accessories.

2. Hang the metal lath by installing mechanical fasteners through the lath into the substrate. Use one mechanical fastener per 1 1/3 square feet. Use of 12 inches spacing on each stud for 16 inches o/c framed structures will provide one fastener per 1 1/3 square feet.
3. The lengths of metal lath should overlap each other by at least 2 inches.

D. Mixing

1. One Coat:

- a. Add 3.5 quarts of potable water into a clean mixing vessel.
- b. Add one 50 pound bag of One Coat.
- c. Mix continuously for 3 minutes to a lump free consistency. Add up to 2 pints additional water.
- d. Allow to breathe for 1 minute and remix 1 minute to improve workability and open time.
- e. Do not retemper or overmix, as this will entrain air and damage the glass fibers.

2. Conpro Stucco with K-88 or Color K-88 Admix:

- a. Shake or stir admixture until homogeneous and add to clean mixing vessel.
- b. Add 3.5 to 4 quarts of potable water to vessel and slowly add all of the powder.
- c. Mechanically mix with low speed drill (400 to 600 rpm) and mixing paddle or mortar mixer for 3 continuous minutes until uniform and lump free.
- d. Add up to 2 pints of additional water if needed.
- e. Allow to breathe for 1 minute and then remix for 1 minute to improve workability and open time.
- f. Do not overmix.

E. Application

1. Conpro One Coat:

a. Direct Applied:

- 1). Surface should be saturate surface dry but hold no standing water.
- 2). Trowel or spray apply material to a uniform minimum of 3/8 inch and a maximum of 7/8 inch.
- 3). Apply additional coat of 1/16 to 1/8 inch to achieve a level plane where desirable.
- 4). Keep damp with a fine mist of water for 24 hours. Protect from direct sunlight, wind, rain and frost during curing period.

- b. Reinforced with Metal Lath:
 - 1). Trowel or spray apply material to a uniform minimum of 3/16 inch to completely cover the lath.
 - 2). Apply additional material up to 1 inch thick for added impact resistance.
 - 3). Keep damp with a fine mist for 24 hours.

2. Conpro Stucco:

- a. Dampen surface with water immediately prior to application.
- b. Apply a key coat, filling all voids.
- c. Work to a natural breaks to avoid cold joints.
- d. Allow material to take up to thumbprint hard.
- e. Trowel or spray texture coat.

Specifiers Note: Insert the following product for an alternate method for a colored stucco system. The option is to choose Super Color Stain in the same color as Color K-88 Admix or to delete Color K-88 Admix.

3. Super Color Stain:

- a. Follow manufacturer's instructions for application and coverage.
- b. Apply with brush, sprayer or roller in an even coat to achieve desired appearance.
- c. Do not exceed 6 mils. wet per application.
- d. Do not apply to frozen surfaces.
- e. One coat is usually sufficient, however, successive coats can be applied after the previous coat is dry to the touch.
- f. Temperature of the substrate and atmosphere must be 45 degrees F or above during application and for the full curing cycle.

F. Curing

- 1. Conpro One Coat and Conpro Stucco:
 - a. Keep damp with a fine mist of water for 24 hours.
- 2. Super Color Stain:
 - a. Protect from moisture for 24 hours.

3.4 CLEANING

- A. Material left over at the job site by the approved applicator shall be removed.

- B. All adjacent surfaces and materials shall be cleaned.
- C. Any foreign material resulting from the work of the approved applicator shall be removed.

END OF SECTION 092400