

Impact Wall System

Division 9: Finishes

Polymer-modified fiber-reinforced interior and exterior wall system directly applied to CMU, concrete, brick and stucco.

SECTION 099726 – CEMENTITIOUS COATINGS

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:

Surface burning	ASTM E84	FSI equals 5 – Pass
Full scale fire test	ASTM E108 Modified	Did not ignite – Pass
Humidity exposure	FS 141A Method – 6201	Pass
Salt spray	ASTM B117	Pass
Absorption and freeze/thaw	EIMA 101.01, ASTM C67 Modified	Pass
Water vapor transmission	ASTM E96	Perms 1.747 grains per hour foot squared
Sand abrasion	ASTM D968	500 liters – Pass
Accelerated weathering	ASTM G23	2000 hours – Pass
Mildew resistance	Mil. Std. 810D Method – 508.3	Pass

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 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 products from precipitation and high wind for at least 8 hours.
- 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. Structural Skin: Fiber-reinforced cementitious structural coating.
- B. K-88 Admix: An acrylic admix designed to enhance the performance of cement-based products.
- C. Plastic Components' joint and trim accessories:
 - 1. 1025 Standard Flange Casing Bead 1/4 inch (also referred to as Stop Bead)
 - 2. 1A Corner Bead 2.5 inch by 2.5 inch
 - 3. 2025 – M Control Joint 1/4 inch

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. Repair spalled areas, static cracks and voids with Structural Skin.
- C. Substrate should have an open pored and textured surface.
- D. Saturate substrate with clean water (saturated surface dry/SSD). Wall should be wet when Structural Skin is applied.
- E. For best results on concrete, grind or abrasive blast to achieve Concrete Surface Profile 3. Refer to ICRI Surface Preparation Guide 03732 for more information.
- F. All detailing must be designed prior to the installation of the wall system.
- G. Expansion joints will be installed where joints occur in the substrate.
- H. Control joints are needed where the system abuts other materials and where there are changes of the substrate and plane.
- I. Apply 1025 Standard Flange Casing Bead to top and bottom of walls, windows, expansion joints and other openings.
- J. Apply 1A Corner Bead to corners.
- K. 2025 M Control Joint is surface mounted within the area to create panels.
- L. All vertical joints must be continuous, with breaks occurring at the horizontal joint (T-intersections).
- M. Do not overlap accessory joints. Set each accessory butt joint in silicone sealant.

3.3 APPLICATION

- A. Mixing
 - 1. Mechanically mix using a low speed drill (400 to 600 rpm) or mortar mixer.
 - 2. Pour 4 quarts of potable water into a clean mixing vessel. Add 1 quart of K-88 Admix.
 - 3. Slowly add the entire 50 pound bag of Structural Skin.
 - 4. Mix continuously for 3 minutes to a uniform, lump free consistency.
 - 5. Add up to 1 pint of additional water.
 - 6. Allow to breathe for 1 minute, then remix for 1 minute.
 - 7. Do not overmix, this will entrain air and damage the fibers.
- B. Application
 - 1. At the time of application, surfaces should be saturated surface dry, but hold no standing water.

2. Apply Structural Steel modified with K-88 Admix with a stainless steel trowel or spray to a uniform thickness of 1/8 to 1/4 inches.
 3. Cover the entire wall panel without stopping. Trowel smooth to provide a surface receptive to the finish coat.
 4. Allow to set to a thumbprint hard state.
 5. Apply additional coat at 1/16 to 1/18 inches to achieve a level plane, where desirable.
 6. Trowel on with a vertical motion and finish with a horizontal motion.
- C. Curing
1. Keep damp with a fine mist of water for 24 hours.
 2. Protect from precipitation, frost, direct sunlight and high wind for at least 8 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 099726