

SECTION 030120 – MAINTENANCE OF CONCRETE REINFORCING

PART 1 GENERAL

1.1 SUMMARY

Provide labor, materials, equipment and supervision necessary to complete the application of product to reinforcing steel and concrete.

1.2 SYSTEM DESCRIPTION

The products shall meet or exceed the following performance requirements:

Flash point	ASTM D56	>200 degrees F Seta cc
Density of liquid coatings	ASTM D1475	8.4 pounds per gallon
Water vapor transmission	ASTM E96	4 perms at 10 mils.
Protection of embedded rebar	NCHRP 278	
Uncoated		Corrosion at 10-12 cycles
Coated with ECB		No corrosion after 50 cycles
Corrosion of embedded steel reinforcement	ASTM G109	No corrosion after 80 cycles
Resistivity – Wiss, Janney, Elstner procedure		5.3 x 10 ⁷ ohm per centimeter
Accelerated weathering – QUV	ASTM G154	2000 hours – UV-B cycled with condensation- no effect
Direct tensile strength	ACI 503R	300 psi
Slant shear bond strength	ASTM C882	900 psi

1.3 SUBMITTALS

- A. Manufacturer’s current product data bulletin.
- B. The trained applicator shall prepare a test panel of the repair installed on the actual building 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 and all accessories in original labeled, sealed, and undamaged containers or bundles.

- 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

All products shall be applied at substrate and ambient temperatures of 40 degrees F or above. A minimum temperature of 40 degrees F shall be maintained 24 hours after completion of work. Protect products from weather and other damage for a period of 24 hours after installation. 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

ECB: A water based, single component, anti-corrosion coating and long open time bonding primer.

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. Reinforcing Steel:
 - 1. Mechanically remove all scaling rust from metal.
 - 2. Remove concrete around rebar to provide a minimum 3/4 inch clearance.
 - 3. Remove concrete along the length of the bar until the exposed bar shows no sign of corrosion activity.

B. Concrete:

1. Remove loose and deteriorated material, laitance, dirt, dust, oil and any surface contaminants that will inhibit proper adhesion.

3.3 APPLICATION

A. Mixing

1. No additives of any kind shall be added to any of the products, except for small amounts of clean, potable water as directed on package labels.
2. Stir or mechanically mix using a low speed drill (400 - 600 rpm) until homogeneous.

B. Application

1. Brush or spray apply a uniform 7 mils. wet to all exposed steel. For spray applications use a Graco 3500 or equivalent. Refer to Conproco Black Book.
2. Brush or spray apply a uniform 7 mils. wet to prepared concrete surface when using as a bonding primer.
3. In severe environments a 2 coat application on steel is recommended.
4. Reapply ECB to concrete if substrate is not covered with repair material within 5 days.
5. Reapply ECB to reinforcing steel in not covered with repair material within 30 days.

C. Curing

1. Allow ECB to dry for a minimum of 30 minutes at 70 degrees F and be dry-to-touch Before placing covering material or applying a second coat.

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 030120