

# DURALPREP A.C.

## BONDING AGENT AND ANTI-CORROSION COATING FOR REINFORCEMENT

### DESCRIPTION

**DURALPREP A.C.** is a three component, pre-proportioned, water based epoxy modified portland cement bonding agent and anti-corrosion coating. DURALPREP A.C. is used as a bonding agent for placing fresh concrete to existing concrete and for repair and restoration of concrete surfaces. DURALPREP A.C. contains a unique migratory corrosion inhibitor which protects reinforcement when used as an anti-corrosion coating for steel. DURALPREP A.C. has a long open time, is non flammable, VOC compliant, and does not form a water vapor barrier after cure.

### PRIMARY APPLICATIONS

- Bonding agent for fresh concrete to existing concrete
- Concrete repairs with cement or epoxy mortars
- Anti-corrosion coating for steel reinforcement
- Exterior or interior
- On grade or above grade applications

### FEATURES/BENEFITS

- ▲ Can contribute to LEED points
- Long open time
- Migratory corrosion inhibitor

### TECHNICAL INFORMATION

**Material Properties @ 75°F (24°C), 50% R.H.**

**Mix ratio (A:B:C):** 1 gal: (3.8L) 1 gal: (3.8L) 36 lbs (16.3 kg)

**Color** Concrete Gray

**Pot Life:** 30 to 45 mins.

**Contact Time** Up to 24 hours depending on ambient temperature

**Initial Set** (ASTM C 266) 2 to 3 hrs

**Bond Strength** (ASTM C 882), 7 days: psi (MPa)

1 hr open time 2,480 (17.1)

24 hr open time 2,700 (18.6)

**Compressive Strength** (ASTM C 109) psi (MPa)

3 days >5,100 (35.2)

7 days >7,300 (50.3)

28 days >10,000 (68.9)

**Flexural Strength** (ASTM C 348)

28 days: >1,280 (8.8)

**Splitting Tensile Strength** (ASTM C 496)

28 days >600 (4.1)

**Water Vapor Permeability**

(ASTM E 96) 0.16 grains/ft<sup>2</sup> hr.

*Values presented are typical and not necessarily referenced to create specifications*

### PACKAGING

DURALPREP A.C. is packaged in 3.75 gal (14.2 L) kits and 2/1 gal (3.8 L) units/case.

### SHELF LIFE

1 year in original, unopened package.

### COVERAGE

One 3.75 gal (14.2 L) kit of DURALPREP A.C. will cover approximately 250 ft<sup>2</sup> (23.2m<sup>2</sup>). One 1 gal (3.8L) unit will cover approximately 65 ft<sup>2</sup> (6 m<sup>2</sup>).

Bonding Agent 60 to 80 ft<sup>2</sup>/gal (1.47 to 1.96 m<sup>2</sup>/L)

Anti-Corrosion Coating 60 to 80 ft<sup>2</sup>/gal/coat (1.47 to 1.96 m<sup>2</sup>/L)

**Note:** Coverage rates are approximate, and for estimating purposes only. Test the area prior to application to determine effective coverage rates. Surface temperature, porosity, and texture will determine actual material requirements.

### DIRECTIONS FOR USE

**Surface Preparation:** The surface must be structurally sound, dry, free of grease, oils, curing compounds, efflorescence, laitance and any other contaminants that would interfere with adhesion. All previous coatings on the substrate must be removed. **Concrete:** Smooth, precast and formed concrete surfaces must be cleaned, roughened and made absorptive by mechanical abrasion. All coatings must be removed completely to provide an absorptive surface. Remove excess moisture, drips and puddles from the surface. The surface should be saturated surface dry (SSD) with no standing water prior to application. **Steel:** All oils, greases, dirt, old coatings or chemical contaminants must be removed. All steel surfaces should be blasted to a "NEAR WHITE" metal finish using clean dry blasting media.



**The Euclid Chemical Company**

19218 Redwood Rd. • Cleveland, OH 44110

Phone: [216] 531-9222 • Toll-free: [800] 321-7628 • Fax: [216] 531-9596

www.euclidchemical.com

An **RPM** Company



**Mixing:** Mix one full kit at a time. DURALPREP A.C. must be mechanically mixed with a slow speed motor and mixing blade to thoroughly disperse all ingredients. A 1/2" (13mm) drill motor and a "Jiffy" mixer may be used. Premix each containers (Parts A & B). Pour the Component A and Component B into a clean container. Start mixer and mix at slow speed for 30 to 45 seconds. Do not aerate the mix. While mixing gradually, add all of the Part C powder into the mixed liquid to produce a smooth lump free consistency. Mix thoroughly for approximately 3 minutes.

**Application:** Air and surface temperature must be above 45°F (7°C) and rising. Maximum temperature should not exceed 90°F (32°C). The approximate working life is 30 to 45 minutes depending on the temperature. **Bonding Agent:** Apply DURALPREP A.C. to the SSD surface using a stiff bristle brush or spray equipment. Allow to cure 30 minutes before placing concrete. DURALPREP A.C. has an open time of from 30 min to 24 hrs at 75°F (24°C). **Anti-Corrosion Coating:** Coat the exposed reinforcing steel, making sure to coat the underside portion of the steel. Apply two coats at 20 mils each by brush or spray, allowing 3 to 6 hours between applications. Place fresh mortar or concrete within the open time of the second coat of DURALPREP A.C. 30 min to 24 hrs at 75°F (24°C).

## CLEAN-UP

Clean tools and equipment with water immediately following use. Clean drips with water while still wet. Dried DURALPREP A.C. will require mechanical abrasion for removal.

## PRECAUTIONS/LIMITATIONS

- Mix only one full kit at a time.
- Do not mix for longer than 3 minutes.
- Do not allow components to freeze.
- Do not apply at temperatures below 45°F (7°C), or above 90°F (32°C).
- Do not add water to mix.
- Maximum open time: 12 hours @ 90°F (32°C), 24 hours @ 75°F (24°C), 30 hours @ 45°F (7°C).
- Store at temperatures between 65°F and 80°F (18°C to 27°C).
- Protect from freezing.
- Do not use Component A or B if it has frozen.
- Protect from moisture.
- In all cases, consult the Material Safety Data Sheet before use.

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