



SPECIALTY CONSTRUCTION PRODUCTS

Polyweld-EPX^{Cl}

Bonding Agent
Reinforcement Protection
with Migrating Corrosion Inhibitor

P R O D U C T D A T A

DESCRIPTION

ChemMasters' Polyweld-EPX^{Cl} is a 3 component, solvent free, moisture tolerant, epoxy modified, cementitious product specifically formulated as a bonding agent and anti-corrosion coating.

USES

- Anti-corrosion coating for reinforcing steel in concrete restoration
- Added protection of reinforcing steel in areas of thin concrete cover
- Bonding agent for repairs to concrete and steel
- Bonding agent for lacing fresh plastic concrete to existing hardened concrete

ADVANTAGES

- Excellent adhesion to concrete and steel
- Effective barrier against penetration of water and chlorides—not a vapor barrier
- Long open time (up to 24 hours see table pg.2)
- Bonding agent & corrosion protection in one product
- Can be used on exterior surfaces
- Contains corrosion inhibitors
- Excellent bonding bridge for cement or epoxy based repair mortars
- High strength
- Unaffected by moisture when cured
- Spray, brush, or roller application
- Non-flammable, solvent free

Packaging	
Part A 1.8 gal Resin (15 lbs)	F3475.00A
Part B 0.1 gal Hardener (0.9 lb)	F3475.00B
Part C 50 lbs powder	F3475.00C

TECHNICAL DATA

Bond Strength (ASTM C 882) 14 days moist cure, plastic concrete to hardened concrete		
	psi	MPa
Wet on Wet	2,800	19.3
12 hr open time	2,500	17.2

Compressive Strength (ASTM C 109)		
	psi	MPa
7 days	6,400	44.1
28 days	8,200.	56.5

Flexural Strength (ASTM C 348)		
	psi	MPa
7 days	650	4.5
28 days	1,050	7.3

Bond of Steel Reinforcement to Concrete (Pullout Test)		
	psi	MPa
Polyweld-EPX ^{Cl}	625	4.3
Epoxy Coated	510	3.5
Plain Reinforcement	575	3.96

Splitting Tensile Strength (ASTM C 496)		
	psi	MPa
28 days	600	4.4

Properties	
Density (mixed)	122.3 lbs / ft ³ (16.35 lb/gal)
Water permeability: @ 10 bar (145 psi) Control: @ 10 bar (145 psi)	8.92 x 10 ⁻¹⁵ ft/sec 7.32 x 10 ⁻¹⁰ ft/sec
Water Vapor Diffusion Coefficient	110
Carbon Dioxide Diffusion Coefficient CO	14,000
Pot Life @ 70°F (21 °C)	Approx. 60 min
Color	Concrete gray



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DIRECTIONS FOR USE:

Estimating Guide		
	Surface	Coverage
Bonding Agent	Smooth	80 ft ² /gal (20 mils thick)
Reinforcement Protection	Irregular	40 ft ² /gal (20 mils thick) 2 coats
Yield per unit	0.54 ft ³ (0.015 m ³)	4 gal (15.1L)

Surface Preparation

Cementitious substrates should be cleaned and prepared to achieve a laitance and contaminant free open textured surface by blast cleaning or equivalent mechanical means. Substrate must be saturated surface dry (SSD) with no standing water.

Steel should be cleaned and prepared thoroughly to white metal by blast cleaning per NACE SSPC –SP-5.

Mixing

Shake contents of both Component A and B. Empty entire contents of both into a clean dry mixing pail. Mix thoroughly for 30 seconds with a paddle drill on low speed (400 to 600 rpm). Slowly add the entire contents of Component C with continuous mixing for 3 minutes until blend is uniform and free of lumps. Mix only as much as can be applied in < 60 minutes.

Applications:

As a bonding agent:

Apply with a stiff bristle brush or broom. Spray apply with hopper gun or similar equipment. For best results work the bonding slurry well into the substrate to ensure complete coverage of all surface irregularities. Apply the freshly mixed patching mortar or concrete wet on wet, or up to the maximum recommended open time, onto the bonding slurry. Minimum thickness as a bonding agent is 20 mils.

For Corrosion protection for reinforcing steel:

Apply with a stiff bristle brush at a rate of 80 ft² per gallon (20 mils). Take special care to coat the underside of totally exposed steel. Allow first coating to dry 2 or 3 hours @ 73°F, then apply a second coat at the same coverage rate. Allow second coat to dry before the repair mortar or concrete is applied. Minimum thickness to protect reinforcement steel is 40 mils (2 coats, 20 mils each).

Maximum recommended open time:

Between application of bonding agent or corrosion protection coating and patching mortar or concrete is dependent on the ambient temperature.

See table for recommended guidelines for varying ambient temperature. Note: humidity will also effect dry times.

Maximum open time at given temperature. (Exposure to atmosphere before applying concrete or repair mortar to surface)		
°F	°C	Hours
95	35	12
68	20	16
50	10	24

Clean Up

Clean tools and equipment with soap and water before material hardens.

Limitations:

- Substrate and ambient temperature should be a minimum 50°F (10°C) Maximum 95°F (35°C)
- Protect material from freezing.
- Shelf life is one year in unopened containers stored in dry warm area > 50°F (10°C).
- Maximum open time before material is placed over **Polyweld EPX^{CI}** is 24 hours at 50°F (10°C) and 12 hours at 95°F (35°C) see chart above for details.

Use the most current version of the Product Data and Safety Data Sheet. Go to www.chemmasters.net or contact ChemMasters' Technical Service at 1-800-486-7866 to verify the most current versions or for technical support.

Proper application is the responsibility of the user. ChemMasters can only make technical recommendations and cannot provide quality control on the job site.

This Product is Formulated and Labeled for Industrial and Commercial Use Only

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