



Civil Engineering

# EM 5-2

EPOXY ADHESIVE / MORTAR

**TYPE:**

Pilgrim EM 5-2 is a 100%-solids, 2-component, medium viscosity, moisture insensitive epoxy resin system.

Texas DOT Specification D-9-6120 Type V & VIII. Florida Dot Type A, B ; Louisiana DOT Type I,II,III B ; Georgia DOT Type II& III; Mississippi DOT Section 907-808.02 ; Alabama DOT Type II, Grade 2, Class C; Tennessee DOT List 8 and List 22; North Carolina DOT Type 3; Meets ASTM C-881.

**DESCRIPTION:**

Pilgrim EM 5-2 is a versatile system with excellent physical and chemical properties. High strength, solvent free adhesives for structural bonding, grouting, dowel or rebar anchoring. Use neat as an adhesive or mix with an aggregate as a no-shrink mortar for patching and topping, for splicing concrete piling, for leveling heavy equipment and for anchoring bolts. Use as a bonding adhesive between plastic concrete and hardened concrete. Use on dry or damp substrates.

**ADVANTAGES:**

- Convenient 1 to 1 by volume mix ratio
- Liquid in form & yet contains no volatile solvents
- Adheres to most materials used in construction
- Rapid gain of physical properties
- No by-products generated during cure
- High tensile and compressive strength
- Sure-cure in the presence of moisture
- Resistant to the action of weathering, moisture, acids, alkalis

**TEST PROPERTY**

**VALUE**

Mixed viscosity, poises, Brookfield	45.4
Gel time, min. @ 25° C, ASTM C881	25
Water Absorption, %, ASTM D570	0.1
Colors	Amber or Gray
Compressive Strength, psi @ 24 hr., ASTM D695	8574
Compressive Strength, psi @ 72 hr., ASTM D695	10,050
Slant Shear strength, psi, ASTM C882	4950
Bond Strength,psi, GDT-58	755
Shelf Life	2 yr. min.

**PACKAGING:** EM 5-2 is available in 2 gallon, 10 gallon and 100 gallon units

**SURFACE PREPARATION:**

The success of any adhesive application is directly proportional to the completeness of substrate preparation and the care your crews put into the application. Surface must be clean and sound. Remove dust, laitance, grease, curing compounds, impregnations, waxes, foreign particles & disintegrated materials from surface. Prepare concrete by sandblasting or other approved mechanical methods. Steel - sandblast to appropriate finish.

**MIXING:**

Mix part A with part B at a ratio of 1 to 1 by volume. Proportion components into a clean pail and mix for approximately 3 minutes with a jiffy mixer (or equivalent), on a low speed (400-600 rpm) drill until color is a uniform blend. Pilgrim EM 5-2 is designed for application both neat and as mortars. Proportion of aggregate to 1 part mixed epoxy varies with proposed end use. 1 to 3 parts aggregate to 1 part mixed EM 5-2 is a general recommendation. CAUTION ---Aggregate must be oven dried to avoid encapsulation of moisture.

**YIELD:**

1 gallon covers approximately 80 sq. ft. on a smooth surface.  
2 gallon mixed with 4 parts aggregate yields 925 cu. inches (.54 cu/ft.) of grout.

**LIMITATIONS:**

Do not thin EM 5-2. Solvent will prevent proper cure.  
Exposure to temperatures (after cure) above 200 ° F not recommended.  
Substrate temperature must not be below 40 ° F during application.

**CAUTION:**

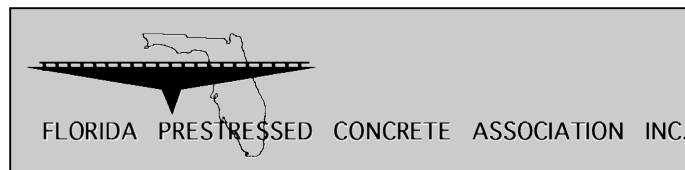
Pot life is dependent upon material temperature and quantity mixed.  
The greater the mass the shorter the pot life.  
Increased mass and temperature result in higher exothermal and shorter pot life.

**STORAGE:**

Store inside in tightly closed containers at moderate temperatures. Opened containers should be resealed as soon possible to prevent moisture contamination.

**CLEAN UP:**

Pilgrim #5 Cleaner is formulated to remove uncured material from tools.



**Pilgrim EM 5-2**

Compressive Properties (ASTM D-695):  
Compressive Strength, psi

	50°F	73°F	90°F
8 hour	-	1,900	2,700
12 hour	900	5,010	6,200
1 day	2,400	6,035	7,600
3 day	5,200	8,740	9,600
7 day	6,300	11,400	11,400