



EpoxySystems' Product #682

HMWM Polymer Concrete

DESCRIPTION

PRODUCT #682 HMWM Polymer Concrete is a second generation polymer concrete. PRODUCT #682 is non-hazardous, odorless and a non red label product. The monomer has a flash point greater than 200°F. PRODUCT #682 exhibits excellent physical properties and no shrinkage on curing. PRODUCT #682 provides superior chemical resistance to all portland cement concretes.

ADVANTAGES

- Flash point is 220°F (no red label)
- No odor
- High Strength—7,000 to 8,000 psi in 2 hours even at 32°F (0°C). Low shrinkage
- Superior chemical resistance
- Excellent flow
- Preproportioned packaging for easy mixing

WHERE TO USE

Concrete floors, bridges, walkways, bolt anchorage and concrete surfaces where chemical resistant properties are required.

SURFACE PREPARATION

All laitance, grease, curing compound residue, or any other contaminants must be removed by either abrasive blasting, water blasting, wire brushing or other suitable means.

PRIMING

For best results, PRODUCT #682 Primer should be used. To prime surface, mix Component "A" (liquid) and Component "B" (initiator) for two minutes, and apply immediately to the prepared surface by brush or roller. Apply primer at the rate of 50-100 SF (9.29 m²) per gallon, depending on porosity of surface. Weight of mixed primer is 8.4 lbs. per gallon (3.8 kilo per gallon).

MIXING

Add Component "C" (purple liquid) to Component "A" (monomer liquid) and mix well for (1) one minute. Pour mixture into polyethylene bag containing Component "B" (hardener filler). Shake materials approximately 15-30 times. (Or use a slow speed air drill or electric mixer in 5 gallon pails or mortar mixer for larger quantities). Place immediately after mixing. Coarse Aggregate may be added at up to 50% by weight when patches are deeper than 2 inches (50mm).

APPLICATION

Place material into area to be resurfaced or patched. Finish with wood float, or steel trowel. Do not overwork or over trowel.

COVERAGE

A 38 lb. unit of PRODUCT #682 Polymer Concrete will yield .28 cu. ft. of material, which will cover 8.95 sq. ft. (0.83m) at 3/8" (9.53mm thick, neat) (No aggregate).

LIMITATIONS

Surfaces to receive PRODUCT #682 Polymer Concrete must be dry. This material has a limited shelf life of 1 month.

PACKAGING

Component "A" (liquid) in 1/2 gal., 1 gal., 5 gal., or 55 gal. containers. Component "B" (hardener filler) in 34 lb. polyethylene bags or 578 lbs. in fiber drum (drum contains 17 x 34 lb. bags). Component C (accelerator) in 3 oz. bottle. PRODUCT #682
Primer: Component "A" (liquid) in 1/2 gal., 1 gal., 5 gal. containers.

PHYSICAL PROPERTIES

Color	Gray
Consistency	Flowable
Working Time	20 minutes for summer grade (test shown is based on 15 minutes @ 75°F)
Compressive Strength* 3" x 6" Cylinders, ASTM C39	
1 hr - 9,000 PSI	62 Mpa + _ 3.45
24 hours - 10,000 PSI	68.95 Mpa + _ 3.45
Compressive Strength 2" Cubes, ASTM C109	
1 hour - 5,500 PSI	37.93 Mpa + _ 3.45
3 hours - 8,500 PSI	58.62 Mpa + _ 3.45
24 hours - 10,000 PSI	68.96 Mpa + _ 3.45
Tensile Strength ASTM C190	
1 hour - 900 PSI	6.21Mpa + _ 0.96
24 hours - 1,400 PSI	9.655 Mpa + _ 0.96
7 days - 1,500 PSI	10.34 Mpa + _ 0.96
Flexural Strength	
1" x 1" x 10" Beams. ASTM C 293	
24 hours - 2,500 PSI	1724 Mpa

* Mix was extended by adding 50% by weight of clean well graded, oven dried pea gravel.

Pull-Out Strength

Using rebar grouted in 6" x 12" (150mm x 300mm) Class A concrete cylinder, air cured for (7) days:

Size Rebar	#4 (1/2" diameter)	12.0mm
Diameter of Grout Pocket	1.25	31.75mm
Depth Imbedded	6"	150mm
Pull-Out Force	3,200psi (concrete failed)	22.00 Mpa

CAUTION

WARNING! May cause skin sensitization or other allergic responses. Avoid inhalation or vapor. Use good ventilation. Wear protective clothing, goggles, gloves and/or barrier creams. In case of contact with eyes, flush immediately with water and contact a physician.

FOR INDUSTRIAL USE ONLY. KEEP AWAY FROM CHILDREN.

For more information please contact:

Epoxy Systems, Inc.

Dunnellon FL / Jericho, VT

352-489-1666 (voice)

352-465-3497 (fax)

info@epoxy.com (Internet)

www.epoxy.com (WWW)

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