



Civil Engineering

Magmaflow Grout-Pak CF

Magmaflow Grout-Pak a 3 component, 100% solids, modified epoxy system formulated to produce a high strength, moisture-insensitive, chemical resistant epoxy grout. Magmaflow Grout-Pak CF was formulated specifically for FRP strengthening reinforcement for near surface mounted (NSM). As NSM reinforcement the FRP is solid circular rod. The force transfer and composite behavior with the existing member is accomplished using an epoxy adhesive (Magmaflow Grout-Pak CF) to bond the FRP and concrete together. The strengthened member's yield and ultimate bending moment capacity will thus be increased due to the additional tensile force provided by the supplemental FRP reinforcement. Bond Strength Test Report

Advantages

- Pre-proportioned units
- High Flowability and fill characteristics
- Good chemical, corrosion and impact resistance
- Excellent Adhesion
- Excellent bearing area for even distribution of loads

Packaging

1 Gallon Unit - Component A (Resin) Component B (Curing agent) Component C (Aggregate). Mix only complete units.

Property	Test Value	Test Method
Compressive Strength Cubes 7 day Cure @ 73°F	17,700 psi	ASTM C 579B
Tensile Strength @ 7 Day	2140 psi	ASTM C 307
Flexural Strength @ 7 Day Cure @ 77°F	3790 psi	ASTM C 580
Modulus of Elasticity @ 7 Day Cure @ 77°F	1,800,000 psi	ASTM C 580
Coefficient of Thermal Expansion @ 74° to 210°F	14.8 X 10 ⁻⁶ in./in./°F	ASTM C 531
Peak Exotherm, Specimen 12" X 12" X 3"	140° F	ASTM D 2471
Slant Shear @ 7 days Bond Strength to Concrete	7600 psi	ASTM C 882
Thermal Compatibility	Passed	ASTM C 884
Linear Shrinkage @ 7 days	< 0.025%	ASTM C 531
Flowability and Bearing	> 90 % Contact area	ASTM C 1339
Gel Time (A+B neat)	15-20 min.	ASTM D 2471

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Compressive Properties	ASTM C-579		
Compressive Strength, psi	40°F	73°F	90°F
2 hour	2,500	4,500	5,500
24 hour	6,500	7,900	9,000
3 day	7,200	10,000+	10,000+
7 day	10,000+	10,000+	10,000+

SURFACE PREPARATION

Substrate must be clean, sound, and dry. Remove dust, laitance, oils, grease, curing compounds and any foreign substances that may interfere with adhesion. Remove by mechanical means (i.e., sand-blasting, grinding, diamond sawing, bush hammering).

LIMITATIONS

Minimum application and substrate temperature 40°F. Condition all components to 70°+ to assure good flow properties. Minimum grout depth is 1 inch. Cold material has reduced flow properties. Mix only complete units.

MIXING

Precondition all components to 70°F+ for 24 hours before using. Remove from the pail all three components. Pour the A & B Component into the pail & mix with a “Jiffy Mixer” blade attached to a 3/4 drill motor for two minutes. Immediately add ½ of the aggregate and mix, add remaining aggregate mix again for 2-3 minutes. Pour the mixed grout without delay. For horizontal anchoring with small hole diameters 1 quart by volume can be removed from the C Component (filler) which provides improved flow to accomplish complete filling of anchor hole.

INSTALLATION

The CFRP bar are mounted in the near surface position using mixed Magmaflow Grout-Pak CF. The 3 part system mixed according to instructions above is poured into the clean, dry designed concrete cut. Grout is placed into cut so it fills approximately ¾ of the depth of the groove along the entire length of the cut. The CFRP is lined up at its proper location and pressed down into the grout. The FRP is moved back and forth using a sawing action to make sure there are no pockets and grout makes even contact through entire length of the CFRP. Care is taken to ensure CFRP is in center of groove and grout is present on either side. Another application of epoxy grout is installed to fill entire groove. A metal trowel is used to remove excess grout. Allow epoxy grout to cure.

CLEAN-UP

Clean tools and equipment with Pilgrim #5 Cleaner.

STORAGE

Store inside in tightly closed containers at moderate temperatures. Shelf life is two years in original packaging. Aggregate must be completely dry.

HANDLING PRECAUTIONS

For Industrial Use Only! Warning! May produce skin irritation and on prolonged contact may cause serious skin dermatitis. Skin contact should be avoided by use of protective clothing such as rubber gloves and eye protection. **WEAR PROTECTIVE CLOTHING, GOGGLES, GLOVES, etc.**

Consult Material Safety Data Sheets.