

POLYMER MODIFIED FIBER REINFORCED DECK MIX

PRODUCT NO. 1251-81

DIVISION 3

Structural Concrete

03 31 00

PRODUCT DESCRIPTION

QUIKRETE® Polymer Modified Fiber Reinforced Deck Mix is an air-entrained, normal-setting, polymer modified, fiber-reinforced material designed to repair highways, bridge decks, concrete parking lots, and other concrete surfaces.

PRODUCT USE

QUIKRETE® Polymer Modified Fiber-Reinforced Deck Mix is designed as a patching material for commercial applications at a thickness of 2 in to 24 in thick (50 mm to 610 mm). QUIKRETE® Polymer Modified Fiber Reinforced Deck Mix is fortified with an integral corrosion inhibitor. QUIKRETE® Polymer Modified Fiber Reinforced Deck Mix is made from specially blended cement, fibers, carefully graded aggregates and additives approved for use in structural concrete. The product is air entrained and contains other additives to promote superior durability, high strength, and long working time.

SIZES

• QUIKRETE® Polymer Modified Fiber-Reinforced Deck Mix - 80 lb (36.2 kg) bags

YIELD

• Each 80 pound (36.2 kg) bag of QUIKRETE® Polymer Modified Fiber Reinforced Deck Mix will yield approximately 0.6 cu ft (17 L).

TECHNICAL DATA

APPLICABLE STANDARDS

- ASTM C 39 Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
- ASTM C 78 Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)
- ASTM C143 Standard Test Method for Slump of Hydraulic-Cement Concrete
- ASTM C 157 Standard Test Method for Length Change of Hardened Hydraulic-Cement Mortar, and Concrete
- ASTM C 231 Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
- ASTM C 496 Standard Test Method for Splitting Tensile Strength of Cylindrical Concrete Specimens
- ASTM C 666 Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing
- ASTM C 672 Standard Test Method for Scaling Resistance of Concrete Surfaces Exposed to Deicing Chemicals
- ASTM C 882 Standard Test Method for Bond Strength of Epoxy-Resin Systems Used with Concrete by Slant Shear



- ASTM C 1583 Standard Test Method for Tensile Strength of Concrete Surfaces and the Bond Strength or Tensile Strength of Concrete Repair and Overlay Materials by Direct Tension (Pull-off Method)
- ACI 305R Guide to Hot Weather Concreting
- ACI 306R Guide to Cold Weather Concreting

PHYSICAL/CHEMICAL PROPERTIES

QUIKRETE® Polymer Modified Fiber Reinforced Deck Mix when tested in accordance with ASTM procedures provides typical results as listed in Table 1.

INSTALLATION

MIXING

WEAR IMPERVIOUS GLOVES, such as nitrile when handling product.

The product will require approximately 7 pints (3.3 L) of water per 80 pounds (36.2 kg) of product. If a slump cone is available, adjust water to achieve a 4 in to 7 in (100 mm to 175 mm) ASTM C 143 slump. Exceeding an ASTM C 143 slump of 7 inches (175 mm) is not recommended. This may cause a reduction in performance of the product.

PLACING

- The forms and substrate should be thoroughly dampened but do not leave puddles
- Fill the forms completely working from one end to the other. Avoid partial depth lifts, which could result in cold joints
- Consolidate the material using hand tamping and/or chopping with a shovel. It is particularly important to compact around the edges of the forms or patches. Mechanical vibration should be avoided in areas that will be exposed to de-icing chemicals
- Screed the surface, and then apply a trowel or broom finish as desired

CURING

Proper curing increases the strength and durability of concrete repair materials. Under hot, dry and windy placing conditions, all concrete tends to lose moisture unevenly and may develop plastic shrinkage

cracks. The use of sheeting, monomolecular films (either sprayed or rolled on), as well as application of a very fine fog spray of water, has been quite successful in arresting shrinkage cracking.

PRECAUTIONS

- Follow ACI 305R when using product in hot weather. An example of an additional step would be using cold water when mixing in extremely hot weather.
- Follow ACI 306R when using product in cold weather. Examples of additional steps would be using hot water when mixing in severely cold weather and using plastic sheeting and insulation blankets if temperatures are expected to fall below 32 °F (0 °C).
- For best results, do not overwork the material.

WARRANTY

NOTICE: Obtain the applicable **LIMITED WARRANTY** at www.quikrete.com/product-warranty or send a written request to The Quikrete Companies, LLC, Five Concourse Parkway, Atlanta, GA 30328, USA. Manufactured by or under the authority of The Quikrete Companies, LLC. © 2020 Quikrete International, Inc.

TABLE 1 TYPICAL PHYSICAL PROPERTIES

Compressive Strength, ASTM C39

<i>Age</i>	<i>PSI (MPa)</i>
1 day	2000 (13.7)
3 days	4000 (27.5)
7 days	5000 (34.4)
28 days	6500 (44.8)

Flexural Strength, ASTM C78

<i>Age</i>	<i>PSI (MPa)</i>
28 days	≥ 700 (4.8)

Length Change, ASTM C 157

<i>Age, Condition</i>	
28 days, air	≥ -0.06%
28 days, water	≤ 0.04%

Air Content, ASTM C 231

4 – 8%

Split Tensile Strength, ASTM C 496

<i>Age</i>	<i>PSI (MPa)</i>
28 days	≥ 400 (2.7)

Freeze Thaw Resistance, ASTM C 666

After 300 cycles ≥ 95% Durability Factor

Scaling Resistance after 25 Cycles, ASTM C 672

Visual ≤ 0.5

Slant Shear Bond Strength, ASTM C 882

<i>Age</i>	<i>PSI (MPa)</i>
7 days	≥ 2500 (17.2)
28 days	≥ 3000 (20.6)

Tensile Strength by Direct Tension (Pull Off Method), ASTM C 1583

<i>Age</i>	<i>PSI (MPa)</i>
7 days	≥ 250 (1.7)
28 days	≥ 500 (3.4)