



POLYMER MODIFIED FIBER REINFORCED DECK MIX

PRODUCT NO. 1251-81

DIVISION 3 & 32

03 01 00 Maintenance of Concrete
03 31 00 Structural Concrete
32 01 29 Rigid Pavement Repair

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

- 80 lb (36.2 kg) bags

YIELD

- An 80 lb (36.2 kg) bag of QUIKRETE® Polymer Modified Fiber Reinforced Deck Mix will yield approximately 0.6 ft³ (17 L) at a concrete consistency

TECHNICAL DATA

APPLICABLE STANDARDS

- ASTM C39 Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
- ASTM C78 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 C157 Standard Test Method for Length Change of Hardened Hydraulic-Cement, Mortar, and Concrete
- ASTM C496 Standard Test Method for Splitting Tensile Strength of Cylindrical Concrete Specimens
- ASTM C666 Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing
- ASTM C672 Standard Test Method for Scaling Resistance of Concrete Surfaces Exposed to Deicing Chemicals
- ASTM C882 Standard Test Method for Bond Strength of Epoxy-Resin Systems Used with Concrete by Slant Shear



- ASTM C1202 Standard Test Method for Electrical Indication of Concrete's Ability to Resist Chloride Ion Penetration
- ASTM C1583 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)
- ICRI Guideline No. 310.2R Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair
- ACI 305R Guide to Hot Weather Concreting
- ACI 306R Guide to Cold Weather Concreting

PHYSICAL/CHEMICAL

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

INSTALLATION

SURFACE PREPARATION

All surfaces should be clean and free of foreign substances including corrosion present on reinforcing steel. Remove all spalled areas and areas of unsound concrete. The appropriate personal protective equipment should be worn. The repair area should have a vertical edge of 2 in (50 mm) or more. Preparation work done on the repair area should be completed by high pressure water blast, breaker hammer, or other appropriate mechanical means to obtain an exposed aggregate surface. Refer to current ICRI Guideline 310.2R for additional surface preparation information. Substrate and forms (if used) should be saturated with clean water before patching to ensure SSD condition. No standing water should be left in the repair area.

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 C143 slump. Exceeding an ASTM C143 slump of 7 inches (175 mm) is not recommended. This may cause a reduction in performance of the product.

APPLICATION

WEAR IMPERVIOUS GLOVES, such as nitrile when handling product.

Fill the repair area completely working continuously from one end to the other. Avoid partial depth fills which could lead to 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 salts.

After QUIKRETE® Polymer Modified Fiber Reinforced Deck Mix has been compacted and spread to completely fill the forms without air pockets, 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

Slump, ASTM C143	
At 5 Minutes	≤ 7 in (175 mm)
Compressive Strength, ASTM C109 (Modified)	
Age	PSI (MPa)
1 day	2000 (13.7)
3 days	4000 (27.5)
7 days	5000 (34.4)
28 days	6500 (44.8)
Flexural Strength, ASTM C78	
Age	PSI (MPa)
28 days	≥ 700 (4.8)
Length Change, ASTM C157	
Age, Condition	
28 days, air	≥ -0.06%
28 days, water	≤ 0.04%
Split Tensile Strength, ASTM C496	
Age	PSI (MPa)
28 days	≥ 400 (2.7)
Slant Shear Bond Strength, ASTM C882	
Age	PSI (MPa)
24 hours	≥ 2500 (17.2)
7 days	≥ 3000 (20.6)
Freeze Thaw Resistance, ASTM C666	
After 300 cycles	≥ 95% Durability Factor
Scaling Resistance after 25 Cycles, ASTM C672	
Visual	≤ 0.5
Rapid Chloride Ion Penetration, ASTM C1202	
Age	coulombs
28 days	≤ 2000
Tensile Strength by Direct Tension (Pull Off Method), ASTM C 1583	
Age	PSI (MPa)
7 days	≥ 250 (1.7)
28 days	≥ 350 (2.4)