

## EA MIX 10 mm Concrete Repair

### PRODUCT NO. 1001-30

QUIKRETE® EA Mix 10 mm Concrete Repair is an air entrained, fiber reinforced, cementitious concrete repair material. QUIKRETE® EA Mix 10 mm Concrete Repair is a uniformly blended mixture of Portland cement, silica fume, fly ash, sand, 10 mm (3/8") stone and other select ingredients.

## DIVISION 3

Structural Concrete  
03 31 00

### PRODUCT USE

QUIKRETE® EA Mix 10 mm Concrete Repair is used as a concrete repair material for both partial and full depth repairs of slabs, beams, columns, balconies, garages, soffits in bridges, and other concrete structures. The QUIKRETE® EA Mix contains the following selected components:

- Super-plasticizer – Allows for a low water/cement ratio therefore providing increased durability
- Silica fume and fly ash – Increases resistance to sulfate attack, reduces heat of hydration, bleeding, improves pumpability, and ease of placement
- Synthetic fibers – Added to reduce cracking and chipping

### SIZE

• QUIKRETE® EA Mix 10 mm Concrete Repair is available in 30 kg (66 lb) bag.

### YIELD

• Each 30 kg (66 lb) bag will yield approximately 14 L (1/2 ft<sup>3</sup>)

### TECHNICAL DATA

#### APPLICABLE STANDARDS

ASTM International

- ASTM C39 - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
- ASTM C191 Standard Test Method for Time of Setting of Hydraulic Cement by Vicat Needle
- ASTM C882 Standard Test Method for Bond Strength of Epoxy-Resin Systems Used With Concrete By Slant Shear
- ASTM C157 Standard Test Method for Length Change of Hardened Hydraulic-Cement Mortar and Concrete
- ASTM C1202 Standard Test Method for Electrical Indication of Concrete's Ability to Resist Chloride Ion Penetration
- ASTM C469 Standard Test Method for Static Modulus of Elasticity and Poisson's Ratio of Concrete in Compression
- ASTM C642 Standard Test Method for Density, Absorption, and Voids in Hardened Concrete
- ASTM C457 Standard Test Method for Microscopical Determination of Parameters of the Air-Void System in Hardened Concrete
- ASTM C666 Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing
- US Army Corp of Engineers CRD-C 39
- MTO LS-412 Salt Scaling Resistance
- AASHTO T259 Resistance to Chloride Ion Penetration

### PHYSICAL/CHEMICAL PROPERTIES

QUIKRETE® EA Mix 10 mm Concrete Repair when tested in accordance with the referenced procedures/standards provides typical results as listed in Table 1.

TABLE 1 TYPICAL PHYSICAL PROPERTIES

#### MASS DENSITY (ASTM C39)

2300 kg/m<sup>3</sup> (143 lbs/ft<sup>3</sup>)

#### COMPRESSIVE STRENGTH (ASTM C39)

1 DAY 22 MPA (3190 PSI)

3 DAYS 32MPA (4640 PSI)

7 DAYS 40 MPA (5800 PSI)

28 DAYS 50 MPA (7250 PSI)

#### SLANT SHEAR BOND STRENGTH (ASTM C882)

1 DAY 7 MPA (1015 PSI)

28 DAYS 15 MPA (2175 PSI)

#### LENGTH CHANGE/DRYING SHRINKAGE (ASTM C157)

28 DAYS <0.04%

56 DAYS <0.06%

#### RAPID CHLORIDE PERMEABILITY (ASTM C1202)

28 DAYS <700 Coulombs

#### MODULUS OF ELASTICITY (ASTM C469)

28 DAYS 29 GPa (4.2×10<sup>6</sup> PSI)

#### ABSORPTION (ASTM C642)

28 DAYS <5%

#### AIR CONTENT (ASTM C457)

4% to 8%

#### COEFFICIENT OF THERMAL EXPANSION (CRD-C 39)

28 DAYS 7.0×10<sup>-6</sup> mm/mm/°C (3.9×10<sup>-6</sup> in/in/°F)

#### FREEZE/THAW RESISTANCE (ASTM C666 Procedure A)

300 cycles

>90% durability factor

#### SALT SCALING RESISTANCE (MTO LS-412)

50 cycles

<0.8 kg/m<sup>2</sup> loss

### INSTALLATION

#### SURFACE PREPARATION

All surfaces to receive QUIKRETE® EA Mix 10 mm Concrete Repair must be clean and free from contamination of foreign matter that could cause bond failure. Remove all spalled areas and areas of unsound or deteriorated concrete by mechanical methods leaving a clean and roughened surface. The area to receive repair should be a minimum depth of 38 mm (1.5 in) and have a vertical edge of a minimum of 38 mm (1.5 in). Adequate pre-wetting of the concrete substrate should be done prior to the

repair using clean, potable water. The forms and substrate should be thoroughly dampened but do not leave any standing water.

### **MIXING**

**WEAR IMPERVIOUS GLOVES, such as nitrile** when handling product.

QUIKRETE® EA Mix 10 mm Concrete Repair should be mechanically mixed for a minimum of 2-3 minutes. Use the minimum amount of water necessary to obtain a slump of 100 – 150 mm (4 – 6 in). Add approximately 2.4 litres (2.5 quarts) of clean, potable water to a clean mixer for each 30 kg (66 lb) bag of product to be mixed. Start mixer and begin adding the bags of QUIKRETE® EA Mix 10 mm Concrete Repair, adding powder to the water. Adjust the water as needed to achieve the recommended consistency.

### **PLACING**

Place the material full depth from one end to the other; eliminate partial depth lifts between batches. Consolidate the material into the area to be repaired by hand tamping or chopping with a shovel. This is particularly important around the edges of the forms or patches. Screed the finished patches with hand tools to create a finish equivalent to the surrounding surface finish. QUIKRETE® EA Mix 10 mm Concrete Repair has a typical working time of 1 hour at a temperature of 19 °C - 23 °C (66 °F – 73 °F).

### **CURING**

Curing is one of the most important steps in concrete construction. Proper curing increases the strength and durability of QUIKRETE® EA Mix 10 mm Concrete Repair. Apply QUIKRETE® Acrylic Concrete Cure & Seal – Satin Finish (8730) after finishing and when the surface has hardened (may be damp but not wet). QUIKRETE® EA Mix 10 mm Concrete Repair can also be moist cured by keeping the surface wet or by covering the surface with a plastic sheet. Curing should be continued for a period of 5 days in warm weather (21°C [70 °F] or higher) and for 7 days in cooler weather (10 °C - 21 °C [50 °F – 70 °F]).

### **PRECAUTIONS**

Hot and cold temperature precautions, as they apply to concrete, should be followed. This includes but not limited to the following: During extremely hot or dry conditions, cold water should be used to maintain mix at moderate placement temperature. Protect from freezing during the first 48 hours. Plastic sheeting and insulation blankets should be used if temperatures are expected to fall below 0 °C (32 °F)

### **SAFETY PRECAUTIONS**

QUIKRETE® EA Mix 10 mm Concrete Repair contains Portland cement, fly ash, silica fume, and other ingredients. The use of

safety wear and personal protective equipment such as impervious rubber gloves, dust mask, and goggles are recommended.

### **WARRANTY**

The QUIKRETE® Companies warrant this product to be of merchantable quality when used or applied in accordance with the instructions herein. The product is not warranted as suitable for any purpose or use other than the general purpose for which it is intended. Liability under this warranty is limited to the replacement of its product (as purchased) found to be defective, or at the shipping companies' option, to refund the purchase price. In the event of a claim under this warranty, notice must be given to The QUIKRETE® Companies in writing at: One Securities Centre, 3490 Piedmont Road, Suite 1300, Atlanta, GA 30305. This limited warranty is issued and accepted in lieu of all other express warranties and expressly excludes liability for consequential damages.

*\* Refer to [www.quikrete.com](http://www.quikrete.com) for the most current technical data, SDS, and guide specifications*