COMMERCIAL GRADE FASTSET™ REPAIR MORTAR

PRODUCT NO. 1241-60, -50, -20

DIVISION **3**

Maintenance of Concrete
03 01 00

PRODUCT DESCRIPTION

QUIKRETE® Commercial Grade FastSet™ Repair Mortar is a polymer modified, rapid setting repair material specially formulated to make structural repairs to any concrete or masonry surface. Exceeds the requirements of ASTM C928 R2.

PRODUCT USE

QUIKRETE® Commercial Grade FastSet™ Repair Mortar demonstrates low sag, making it ideal for vertical or overhead repairs. QUIKRETE® Commercial Grade FastSet™ Repair Mortar is available with integral corrosion inhibitor in cases where maximum corrosion protection is desired. The addition of corrosion inhibitor has no adverse effect on the other physical properties of the product. This product can be built up to at least 1-1/2 in (38 mm) in one application. Its unique properties allow the user to sculpt the material during application. Use to repair concrete cracks, curbs, steps, pre-stressed panels, pipe, tunnels, sewers, loading docks, silos, retaining walls, culverts, catch basins, decorative moldings, bridge columns, parapet walls, septic tanks, cold storage vaults, virtually any vertical or overhead concrete surface.

SIZES

- QUIKRETE® Commercial Grade FastSet™ Repair Mortar - 60 lb (27.2 kg) bags, 50 lb (22.6 kg) and 20 lb (9 kg) pails

YIELD

- Each 60 lb (27.2 kg) bag of QUIKRETE® Commercial Grade FastSet™ Repair Mortar will yield 0.54 cu ft (15.4 L) of material. QUIKRETE® Commercial Grade FastSet™ Repair Mortar may be extended with 30 lb (13.6 kg) of high quality minus 1/2 in (minus 13 mm) aggregate per 60 lb (27.2 kg) bag for deep repairs.

TECHNICAL DATA

APPLICABLE STANDARDS

- ASTM C109 Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2 in. or [50-mm] Cube Specimens)
- ASTM C157 Standard Test Method for Length Change of Hardened Hydraulic-Cement, Mortar, and Concrete
- ASTM C191 Standard Test Methods for Time of Setting of Hydraulic Cement by Vicat Needle
- 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 C928 Standard Specification for Packaged, Dry, Rapid-Hardening Cementitious Materials for Concrete Repairs
- 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
- ACI 310.2R Guide for Selecting and Specifying Materials for Repair of Concrete Surfaces

PHYSICAL/CHEMICAL PROPERTIES

Typical test results obtained for QUIKRETE® Commercial Grade FastSet™ Repair Mortar, when tested in accordance with applicable ASTM Test Methods, are shown 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. Large vertical or overhead patches deeper than 2 in (50 mm) should contain reinforcing steel. If none is present, new steel should be inserted using appropriate techniques. 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. Saturate repair area 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.

Mix by hand or mechanically for a minimum of 3 minutes using a standard mortar mixer. Add approximately 9-1/2 pt (4.5 L) of potable water to a mortar mixer for each 60 lb (27.2 kg) bag of QUIKRETE® Commercial Grade FastSet™ Repair Mortar being mixed. Add the powder to the water and mix until homogenous. Adjust water, if needed, to achieve a place-able, gel-like consistency. Exceeding an ASTM C1437 flow of 100% is not recommended. This may cause a reduction in performance of the product. Where large quantities of material are used for patches deeper than 2 in (50 mm), QUIKRETE® FastSet™ Repair Mortar may be extended with 30 lb (13.6 kg) of high quality minus 1/2 in (minus 13 mm) aggregate per 60 lb (27.2 kg) bag. The coarse aggregate used should be in SSD condition and meet ASTM C33 requirements.

APPLICATION

WEAR IMPERVIOUS GLOVES, such as nitrile when handling product.
QUIKRETE® Commercial Grade FastSet™ Repair Mortar should be trowel applied to the damp surface. Apply a thin layer with heavy trowel pressure, and then go back and build up to the desired thickness. QUIKRETE® Commercial Grade FastSet™ Repair Mortar obtains high bond strength without the use of bonding adhesives or acrylic additives. After initial set, the material may be trimmed and shaped to match the existing contours of the patch area.

CURING

During the first 24 hours, it is best to keep the patch covered or damp to prevent excessive loss of water. 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

- Mix no more than can be used in 15 minutes.
- 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 or re-temper with additional water.

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.

TABLE 1 TYPICAL PHYSICAL PROPERTIES

Consistency, ASTM C1437	
	80% to 100%
Setting Time, ASTM C191	
Initial	Approx. 20 minutes
Final	20 to 40 minutes
Compressive Strength, ASTM C109 (Modified)	
Age	*PSI (MPa)*
3 hours	2000 (13.7)
24 hours	4000 (27.5)
7 days	5000 (34.4)
28 days	6000 (41.3)
Length Change, ASTM C157	
Age, Condition	
28 days, air	≥ -0.05%
28 days, water	≤ 0.05%
Slant Shear Bond Strength, ASTM C882	
Age	*PSI (MPa)*
24 hours	1000 (6.8)
7 days	1500 (10.3)
28 days	2000 (13.7)
Freeze Thaw Resistance, ASTM C666	
After 300 cycles	≥ 95% Durability Factor
Scaling Resistance after 25 Cycles, ASTM C672	
Scaled Material	≤ 0.5 lb/ft^2 (2.5 kg/m^2)
Tensile Strength by Direct Tension (Pull Off Method), ASTM C1583	
Age	*PSI (MPa)*
28 days	≥ 250 (1.7)