1. Product Name
QUIKRETE® Commercial Grade FastSet™
Non-Shrink Grout #1585-09

2. Manufacturer
The QUIKRETE Companies
One Securities Centre
3490 Piedmont Rd., NE, Suite 1300
Atlanta, GA 30305
(404) 634-9100
Fax: (404) 842-1424
www.quikrete.com

3. Product Description

BASIC USE
QUIKRETE® FastSet Non-Shrink Grout is a dual-purpose product. As a fluid grout meeting ASTM C1107, it is used for anchoring and grouting of anchor bolts, retrofitted reinforcing steel, steel column bases, bearing plates, precast concrete key ways and other installations that require high early and high ultimate strength. Non-shrink characteristics make it stable and capable of holding load transfers.

As a repair material, the product meets ASTM C928 R3 and is used to make partial depth or full depth repairs to roads, bridges, industrial floors and other concrete surfaces.

COMPOSITION & MATERIALS
A blend of special fast-setting hydraulic cement, sand and additives.

SIZE
- QUIKRETE FastSet Non-Shrink Grout is packaged in 60 lb (27.2 kg) bags

YIELD
Yield will vary with water content. When used as a fluid grout, a 60 lb (27.2 kg) bag will yield approximately 0.58 cu ft (16.4 L). Yield will be reduced to approximately 0.55 cu ft (15.6 L) per bag at a flowable consistency.

As a repair material placed at a 3" - 6" (75 - 150 mm) slump, a 60 lb (27.2 kg) bag will yield approximately 0.52 cu ft (14.7 L).

When extended with 30 lb (13.6 kg) of high quality -1/2" (-12 mm) gravel, a 60 lb (27.2 kg) bag will yield approximately 0.7 cu ft (20 L).

4. Technical Data

APPLICABLE STANDARDS
ASTM International
- ASTM C143/C143M Standard Test Method for Slump of Hydraulic Cement Concrete
- ASTM C672/C672M Standard Test Method for Scaling Resistance of Concrete Surfaces Exposed to Deicing Chemicals
- ASTM C928 Standard Specification for Packaged, Dry, Rapid-Hardening Cementitious Materials for Concrete Repairs
- ASTM C939 Standard Test Method for Flow of Grout for Preplaced-Aggregate Concrete (Flow Cone Method)

<table>
<thead>
<tr>
<th>TABLE 1 QUIKRETE® FASTSET™ NON-SHRINK GROUT TESTED AS A GROUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistency</td>
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<tr>
<td>-------------</td>
</tr>
<tr>
<td>Approximate water content per bag</td>
</tr>
<tr>
<td>Row, ASTM C99</td>
</tr>
<tr>
<td>Row, at 5 drops (ASTM C827)</td>
</tr>
<tr>
<td>Working time</td>
</tr>
<tr>
<td>Setting time</td>
</tr>
<tr>
<td>Final</td>
</tr>
<tr>
<td>Compressive strength, ASTM C109</td>
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<tr>
<td></td>
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<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td>Slant shear bond strength, ASTM C928</td>
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<tr>
<td></td>
</tr>
<tr>
<td>Height change, ASTM C1090</td>
</tr>
</tbody>
</table>

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ASTM C1107 Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink)

PHYSICAL/CHEMICAL PROPERTIES
Typical results, obtained with QUIKRETE FastSet Non-Shrink Grout used as a grout, are shown in Table 1. Product complies with all the properties of ASTM C1107 when tested at 73 degrees F (23 degrees C) at a fluid consistency. Typical results obtained with QUIKRETE FastSet Non-Shrink Grout used as a repair material are shown in Table 2. Product complies with applicable portions of ASTM C928 R3 when tested at the conditions specified in Table 2.

5. Installation
INSTRUCTIONS FOR USE AS A GROUT
MIXING
QUIKRETE FastSet Non-Shrink Grout should be mechanically mixed for a minimum of 3 minutes.
- Use the minimum amount of water necessary to provide the desired flow (approximately 1 3/4 gal (6.6 L) for a fluid consistency).
- Do not exceed a flow of 20 seconds by ASTM C939.
- Add most of the mixing water to the mixer first.
- Add the powder to the water and adjust as needed to achieve the desired consistency.

PLACEMENT
Surfaces to receive the grout must be clean and free of any type of foreign matter, grease, paint, oil, dust or efflorescence. In some cases, it may be necessary to roughen smooth surfaces or etch old ones with acid. The area should be thoroughly flushed and soaked with clean water prior to grouting, leaving no standing water. Place the grout quickly and continuously using light rodding to eliminate air bubbles.

CURING
A damp cure of at least 1 day is necessary to control the non-shrink characteristics and maintain strength levels.

WORKING TIME
When properly mixed to a fluid consistency, QUIKRETE FastSet Non-Shrink Grout will fully comply with ASTM C1107 and retain a fluid consistency for 20 minutes at 70 degrees F (21 degrees C).

TEMPERATURE
Grout temperature should be maintained at 50 - 90 degrees F (10 - 32 degrees C) for best results. To achieve specified performance in accordance with ASTM C1107, maintain temperature as close to 70 degrees F (21 degrees C) as possible. Use cold water in hot weather and hot water in cold weather to achieve desired grout temperature. Do not pour grout if temperature is expected to go below 32 degrees F (0 degrees C) within a 12 hour period.

INSTRUCTIONS FOR USE AS A REPAIR MORTAR
MIXING
QUIKRETE FastSet Non-Shrink Grout should be mechanically mixed for a minimum of 3 minutes. Use the minimum amount of water necessary to provide a slump of about 3" - 6" (75 - 150 mm). Add approximately 1 gal (3.8 L) of water to the mixer first. Add the powder to the water and adjust as needed to achieve the recommended consistency. For repairs deeper than 2" (51 mm), add 30 lb (13.6 kg) of high quality gravel with a top size of 1/2" (12 mm) or less to the mix. Mix water will vary depending on the dampness of the aggregate. Do not add more water than needed to achieve a slump of 3" - 6" (75 - 150 mm).

SURFACE PREPARATION
- Remove all spalled areas and areas of unsound concrete and patching.
- The hole should have a vertical edge of 1/2" (12.7 mm) or more, formed by use of a pneumatic jackhammer or sawing. Holes should be chipped out to create a new, sound substrate.
- After the chipping process is completed, the repair area must be cleaned by water blasting or other suitable method.
- Dampen holes with clean water before

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<table>
<thead>
<tr>
<th>Aggregate extension</th>
<th>ASTM C928 R3 Specifications</th>
<th>FastSet™ Non-Shrink Grout</th>
<th>FastSet™ Non-Shrink Grout</th>
</tr>
</thead>
<tbody>
<tr>
<td>No requirement</td>
<td>30 lb (13.6 kg) of 1/2&quot; (-12 mm) gravel</td>
<td>3000 psi (20.7 MPa)</td>
<td>8000 psi (55.2 MPa)</td>
</tr>
<tr>
<td>Slump, ASTM C143</td>
<td>3&quot; - 6&quot; (75 - 150 mm)</td>
<td>3&quot; - 6&quot; (75 - 150 mm)</td>
<td>3&quot; - 6&quot; (75 - 150 mm)</td>
</tr>
<tr>
<td>Setting time, ASTM C191</td>
<td>No requirement</td>
<td>20 - 45 min</td>
<td>20 - 45 min</td>
</tr>
<tr>
<td>Final</td>
<td>20 - 45 min</td>
<td>20 - 45 min</td>
<td>20 - 45 min</td>
</tr>
<tr>
<td>Compressive strength, ASTM C109</td>
<td>3000 psi (20.7 MPa)</td>
<td>5000 psi (34.5 MPa)</td>
<td>8000 psi (55.2 MPa)</td>
</tr>
<tr>
<td>3 hours</td>
<td>3000 psi (20.7 MPa)</td>
<td>6000 psi (41.4 MPa)</td>
<td>6000 psi (41.4 MPa)</td>
</tr>
<tr>
<td>24 hours</td>
<td>5000 psi (34.5 MPa)</td>
<td>6000 psi (41.4 MPa)</td>
<td>6000 psi (41.4 MPa)</td>
</tr>
<tr>
<td>7 days</td>
<td>5000 psi (34.5 MPa)</td>
<td>6000 psi (41.4 MPa)</td>
<td>6000 psi (41.4 MPa)</td>
</tr>
<tr>
<td>28 days</td>
<td>No requirement</td>
<td>8000 psi (55.2 MPa)</td>
<td>8000 psi (55.2 MPa)</td>
</tr>
<tr>
<td>Slant shear bond strength, ASTM C928</td>
<td>1000 psi (6.9 MPa)</td>
<td>1000 psi (6.9 MPa)</td>
<td>1000 psi (6.9 MPa)</td>
</tr>
<tr>
<td>1 day</td>
<td>1500 psi (10.3 MPa)</td>
<td>1500 psi (10.3 MPa)</td>
<td>1500 psi (10.3 MPa)</td>
</tr>
<tr>
<td>7 days</td>
<td>1000 psi (6.9 MPa)</td>
<td>1000 psi (6.9 MPa)</td>
<td>1000 psi (6.9 MPa)</td>
</tr>
<tr>
<td>Scaling resistance, ASTM C672</td>
<td>0.004 lb/ft² (0.129 kg/m²)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
patching. No puddles of water should be left in the hole.

**PLACEMENT**
- The hole should be filled by placing material full depth, from one end to the other to eliminate partial depth lifts between batches.
- Consolidate the material in the hole by hand tamping or chopping with a shovel. This is particularly important around the edges.
- Screed and finish patches with hand tools to create a surface finish equivalent to the existing slab finish.

**CURING**
No special curing procedures are required. Curing at ambient conditions is preferable.

**6. Availability**
QUIKRETE Commercial Grade FastSet Non-Shrink Grout is available at leading concrete construction supply houses and distributors. Contact QUIKRETE Construction Products for the name of the nearest dealer.

**7. 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 other than the general purpose for which it is intended. Liability under this warranty is limited to the replacement of the 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. This limited warranty is issued and accepted in lieu of all other express warranties and expressly excludes liability for consequential damages.

**8. Maintenance**
None required.

**9. Technical Services**
The QUIKRETE Companies maintain technical field representatives throughout the country. Contact your local distributor for the name and number or call QUIKRETE Construction Products at (404) 634-9100.

**10. Filing Systems**
Additional product information is available from the manufacturer.