



1. Product Name

QUIKRETE® Non-Shrink Precision Grout #1585-00

2. Manufacturer

The QUIKRETE Companies
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3. Product Description

BASIC USE

Typical applications for QUIKRETE Non-Shrink Precision Grout include grouting of:

- All types of machinery
- Steel columns
- Bearing plates
- Precast concrete
- Other anchoring conditions that require high in-service strength

The nonshrink characteristics of Non-Shrink Precision Grout make it stable and capable of handling high load transfers.

COMPOSITION & MATERIALS

QUIKRETE Non-Shrink Precision Grout is a non-metallic Portland cement based material. Non-Shrink Precision Grout is a preblended product including expansive additives, requiring only the addition of water to obtain flowable properties and high strengths.

SIZES

- 50 lb (22.7 kg) bags

COLORS

- Gray

YIELD

A 50 lb (22.7 kg) bag of QUIKRETE Non-Shrink Precision Grout will yield 0.45 cu ft (12.7 L) at flowable consistency.

LIMITATIONS

The proper cleaning and wetting of surfaces to be grouted is vital to maximum performance. Hot and cold temperature precautions, as they apply to concrete, should also be followed.

4. Technical Data

APPLICABLE STANDARDS

ASTM International

- ASTM C109/C109M Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or (50-mm) Cube Specimens)
- ASTM C827 Standard Test Method for Change in Height at Early Ages of Cylindrical Specimens of Cementitious Mixtures
- ASTM C939 Standard Test Method for Flow of Grout for Preplaced-Aggregate Concrete (Flow Cone Method)
- ASTM C1090 Standard Test Method for Measuring Changes in Height of Cylindrical Specimens from Hydraulic-Cement Grout

TABLE 1 TYPICAL PHYSICAL PROPERTIES AT 73°F (23°C)

Compressive strength, ASTM C109 modified per ASTM C1107

Plastic consistency	
1 day	3000 psi (20.7 MPa)
3 days	9500 psi (65.5 MPa)
7 days	10,000 psi (68.9 MPa)
28 days	14,000 psi (96.5 MPa)

Height change, ASTM C1090

1, 3, 7 and 28 days	0 - 0.2%
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Height change, ASTM C827

	+ 0.6%
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Flowable consistency

1 day	3000 psi (20.7 MPa)
3 days	9000 psi (62.1 MPa)
7 days	9500 psi (65.5 MPa)
28 days	12,500 psi (86.2 MPa)

Height change, ASTM C1090

1, 3, 7 and 28 days	0 - 0.2%
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Height change, ASTM C827

	+ 0.4%
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Fluid consistency

1 day	2500 psi (17.2 MPa)
3 days	5000 psi (34.5 MPa)
7 days	6000 psi (41.4 MPa)
28 days	8000 psi (55.2 MPa)

Height change, ASTM C1090

1, 3, 7 and 28 days	0 - 0.2%
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Height change, ASTM C827

	+ 0.3%
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Pull-out strength, 35,000 psi (241 MPa)

ASTM E488 ¹
¹ 1 1/4" (31 mm) bolts embedded 9" (225 mm) deep in 3" (75 mm) hole in 2000 psi (13.8 MPa) concrete.



QUIKRETE® Non-Shrink Precision Grout #1585-00

- ASTM C1107 Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink)
- ASTM E488 Standard Test Methods for Strength of Anchors in Concrete and Masonry Elements

U.S. Army Corps of Engineers (USACE) - CRD 621

PHYSICAL/CHEMICAL PROPERTIES

QUIKRETE Non-Shrink Precision Grout complies with all properties of ASTM C1107 and CRD 621 producing the results shown in Table 1.

5. Installation

MIXING

QUIKRETE Non-Shrink Precision Grout should be mechanically mixed for a minimum of 5 minutes.

PRECAUTIONS

Add the minimum amount of water necessary to produce the desired flow characteristics as indicated in Table 2. Do not exceed a flow of 20 seconds per ASTM C939.

METHODS

Surfaces to receive the grout must be clean

TABLE 2 APPROXIMATE WATER REQUIRED FOR 50 LB (22.7 KG) OF GROUT

Plastic	1 gal (3.8 L)
Flowable	1 gal + 1 pt (4.3 L)
Fluid	1 gal + 3 pt (5.2 L)

TABLE 3 WORKING TIME

Temperature	Working time
50°F (10°C)	25 min
73°F (23°C)	25 min
90°F (32°C)	15 min

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 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.

WORKING TIME

When properly mixed to a fluid consistency QUIKRETE Non-Shrink Precision Grout will comply with all portions of ASTM C1107 and CRD 621 and retain a fluid consistency for the maximum usable working times stated in Table 3.

TEMPERATURE

Grout temperature should be maintained from 50 - 90 degrees F (10 - 32 degrees C) to achieve specified results. Use cold water in hot weather or 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.

CURING

A damp cure of at least 3 days is necessary to control the nonshrink characteristics and maintain strength levels.

6. Availability

QUIKRETE Non-Shrink Precision 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 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. 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 a local distributor for the name and number of the nearest representative, or call QUIKRETE Construction Products.

10. Filing Systems

- Reed First Source
- Additional product information is available from the manufacturer.