

NON-SHRINK GENERAL PURPOSE GROUT

PRODUCT No. 1585-01

DIVISION 3

Non-Shrink Grouting
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PRODUCT DESCRIPTION

QUIKRETE® Non-Shrink General Purpose Grout is a high strength, non-metallic, portland cement based material with expansive additives designed for grouting steel columns, bearing plates, pre-cast concrete, and anchoring applications.

PRODUCT USE

Typical applications for QUIKRETE® Non-Shrink General Purpose Grout include grouting of:

- Steel columns
 - Bearing plates
 - Precast concrete
 - Keyway grouting
 - Other anchoring or void filling conditions that require high strength
- The non-shrink characteristics of Non-Shrink General Purpose Grout make it stable and capable of handling high load transfers.

NOTE: This product is not for use in precision grouting of machinery. (For precision grouting of machinery use QUIKRETE Non-Shrink Precision Grout #1585-00.)

SIZES

- QUIKRETE® Non-Shrink General Purpose Grout - 50 lb (22.6 kg) bags

YIELD

- Each 50 lb (22.6 kg) bag will yield 0.45 cu ft (12.7 L) at flowable consistency.

TECHNICAL DATA

APPLICABLE STANDARDS

- ASTM C109/109M 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
- ASTM C1107 Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink)
- ASTM C1437 Standard Test Method for Flow of Hydraulic Cement Mortar



- ASTM C309 Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
- CRD 621 Corps of Engineers Spec. for Non-Shrink Grout
- ICRI Guideline No. 310.2R Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repairs
- ACI 305R-16 Guide to Hot Weather Concreting
- ACI 306R-16 Guide to Cold Weather Concreting

PHYSICAL/CHEMICAL PROPERTIES

QUIKRETE® Non-Shrink General Purpose Grout complies with the physical requirements of ASTM C1107 and CRD 621 when tested at 72 °F (22 °C).

SURFACE PREPARATION

All grouting surfaces should be clean and free of foreign substances including corrosion present on steel if applicable. Remove all spalled areas and areas of unsound concrete. The appropriate personal protective equipment should be worn. Preparation work done on the grouting surfaces should be completed by high pressure water blast, breaker, hammer, or other appropriate mechanical means to obtain a properly prepared surface. Refer to current ICRI Guideline 310.2R for additional surface preparation information. Saturate repair area with clean water before grouting to ensure SSD conditions. No standing water should be left in the repair area.

MIXING

Wear impervious gloves, such as nitrile. QUIKRETE® Non-Shrink General Purpose Grout should be mechanically mixed for a minimum of 5 minutes. Add only enough water to achieve the flow required for the specific application per Table 2. Place the grout quickly and consolidate the grout when possible using rodding, vibrating, tamping, etc.

CURING

A damp cure of at least 3 days or applying a curing compound, which complies with ASTM C309, after placing grout, is necessary to control the non-shrink characteristics and maintain strength levels.

PRECAUTIONS

- Additions of cement or other materials will eliminate the designed product qualities
- Water quantities may be affected by temperature, mixing method and batch size
- QUIKRETE® Non-Shrink General Purpose Grout should not be re-tempered
- Mix no more grout than can be placed in 30 minutes.
- Grout temperature should be maintained from 50 °F to 90 °F (10 °C to 32 °C).
- Follow ACI 305R-10 Guide to Hot Weather Concreting 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-10 Guide to Cold Weather Concreting 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).

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 under the authority of The Quikrete Companies, LLC. © 2019 Quikrete International, Inc.

TABLE 1

TYPICAL PHYSICAL PROPERTIES OF FRESHLY MIXED GROUT, ASTM C1107	
Consistency	Plastic
Temperature	72 °F (22 °C)
Compressive strength, ASTM C109 modified per ASTM C1107	
1 day	4,000 PSI (27.5 Mpa)
3 day	5,500 PSI (37.9 Mpa)
7 days	7,000 PSI (48.2 MPa)
28 days	9,000 PSI (62.0 MPa)
Height change, ASTM C1090	
@ 1, 3, 7 & 28 days	0% to 0.2%
Height change, ASTM C827	
	0%
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Consistency	Flowable
Temperature	72 °F (22 °C)
Compressive strength, ASTM C109 modified per ASTM C1107	
1 day	3,000 PSI (20.6 MPa)
3 days	4,500 PSI (31.0 MPa)
7 days	6,500 PSI (44.8 MPa)
28 days	8,000 PSI (55.1 MPa)
Height change, ASTM C1090	
@ 1, 3, 7 & 28 days	0% to 0.2%
Height change, ASTM C827	
	0.3%
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Consistency	Fluid
Temperature	72 °F (22 °C)
Compressive strength, ASTM C109 modified per ASTM C1107	
1 day	2,000 PSI (13.7 MPa)
3 days	3,500 PSI (24.1 MPa)
7 days	5,500 PSI (37.9 MPa)
28 days	7,000 PSI (48.2 MPa)
Height change, ASTM C1090	
@ 1, 3, 7 & 28 days	0% to 0.2%
Height change, ASTM C827	
	0.8%

TABLE 2

WATER REQUIREMENTS FOR 50 lb (22.6 kg) BAG	
Method	Volume
Plastic	4.5 quarts (4.3 L)
Flowable	5.0 quarts (4.7 L)
Fluid	5.5 quarts (5.2 L)

* Refer to www.quikrete.com for the most current technical data, SDS, and guide specification
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