

1. PRODUCT NAME

ProSpec® C-1107 Construction Grout

2. MANUFACTURER

TEC Specialty Products LLC
1105 South Frontenac Street
Aurora, IL 60504-6451 U.S.A.
1-800-832-9002 Customer Service
1-800-832-9023 Technical Support
prospec.com

3. PRODUCT DESCRIPTION

ProSpec® C-1107 Construction Grout is a non-shrink mixture of hydraulic cement, aggregate and additives.

FEATURES & BENEFITS

- Interior/exterior
- Pumpable
- Flowable
- High strength
- Non-shrink
- Non-corrosive
- Non-metallic
- Meets Corps of Engineers Specification CRD-C 621
- Meets or exceeds ASTM C1107

* Use TEC® Patch Additive (used at full strength) for thicknesses of 1/4" (6 mm) to 1/2" (13 mm).

USES

For structural grouting and general purpose structural grouting:

- For use above, at or below grade
- Column bases
- Anchor bolts
- Equipment bases
- Tilt-up panels
- Compressors, generators and pumps
- Steel bearing plates
- Structural columns
- Rebar anchoring
- Baseplates
- Crane rails

Note: To repair voids in concrete due to improper consolidation, use RubCrete or Blend-Crete. See respective product Technical Data Sheet for more information.

SAFETY

READ THE SAFETY DATA SHEET (SDS) BEFORE USING THIS PRODUCT.

SDS Sheets are available on our website prospec.com or contact Medical Emergency Phone Number (24 Hours): 1-888-853-1758, Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300 or contact ProSpec® Technical Services at 800-832-9023 (7:00AM to 5:00PM M-F, Central US Time).

CAUTIONS

Read complete cautionary information printed on product container prior to use. For medical emergency information, call 1-888-853-1758. This Product Data Sheet has been prepared in good faith on the basis of information available at the time of publication. It is intended to provide users with information about and guidelines for the proper use and application of the covered ProSpec® brand product(s) under normal environmental and working conditions. Because each project is different, TEC Specialty Products LLC cannot be responsible for the consequences of variations in such conditions, or for unforeseen conditions.

LEED® Eligibility¹

- Regional Materials (MR-c5)

PRODUCT ENHANCEMENTS



Expansion Stabilization Technology (EST™)

Special additive designed to reduce the potential for cracking and shrinking.

PACKAGING

50 lb (22.7 kg) bag

SHELF LIFE

12 months from the date of manufacture when stored in the original, unopened container under cool, dry conditions and out of direct sunlight.

4. INSTALLATION

Preparation

1. Clean area and remove all unsound concrete, grease, oil, paint and any other foreign materials that will inhibit performance.
2. The surface should be saturated with water, Surface Saturate Dry (SSD) with no puddling of water, 4-24 hours prior to placement.
3. Provide air relief holes in forms where necessary.
4. Release agents are recommended for pretreating wood for wood forming surfaces.

Forms: The design of the form work for grouting should take into account the type of grout, the consistency of the grout, the method of placement, and the distance the grout must travel. The forms should be built so that the grout can be placed as continuously and expeditiously as possible. (Refer to ACI351.1 R Chapter 6 Preparation for Grouting for details.)

Note: It is the responsibility of the installer/applicator to ensure that test areas are performed to determine the suitability of the product for its intended use.

REFER TO:

ACI351.R-99: Report on Grouting Between Foundations and Bases for Support Equipment and Machinery

ACI 351.2R: Foundations for Static Equipment

ACI 306R: Cold Weather Concreting

ACI 305R: Hot Weather Concreting

JOB MOCKUPS

The manufacturer requires that when its ProSpec® products are used in any application or as part of any system that includes other manufacturers' products, the contractor and/or design professional shall test all the system components collectively for compatibility, performance and long-term intended use in accordance with pertinent and accepted industry standards prior to any construction. Written documentation of the tests performed shall be satisfactory to the design professional and contractor. Test results must include the means and methods of application, products used, project-specific conditions being addressed, and standardized tests performed for each proposed system or variation.

MIXING

Note: More or less water may be required to achieve a 25 to 30 second flow or the desired mixing consistency depending on the temperature and other variables.

Adjust the water level to achieve desired flow range before proceeding to testing. See ASTM C-1107 for min/max water variation ranges.

1. Only mix with clean potable water and/or for thicker applications extend with clean SSD 3/8" (9 mm) graded aggregate. Addition of cold water

at high temperatures or warm water at low temperatures will aid in adjusting the mix temperature.

2. Place 3/4 of desired mixing water, start mixer then slowly add the dry material. After all of the powder has been added, slowly add the remaining 1/4 water until the desired consistency is achieved
3. Avoid adding excessive amounts of water that promotes segregation or bleeding of the grout.
4. Mix mechanically with a high torque electric drill, not to exceed 600 RPM, with a paddle type mixing blade or an appropriately sized mortar mixer.
5. Mix for 3-5 minutes to ensure a uniform, lump-free consistency and place immediately.

APPLICATION

Apply when air and substrate temperature are between 40°F (4°C) and 90°F (32°C).

1. Fluid working time 15 minutes at 70°F (21°C).
2. Agitate material as necessary within its working time to maintain workability.
3. Shut down nearby machinery prior to and during placement.
4. Provide vent holes where necessary.
5. Pour and place grout from one side of form to eliminate air voids.
6. A vibrator, rod, chain or trowel may be used to assist in consolidating the grout and eliminating air voids. Use a mixer large enough to permit continuous placement before any part of the grout has set.
7. Confine grout to ensure minimum surface exposure. Avoid vibration for 24 hours after placement.
8. For placements greater than 3" (76 mm), extend the grout with 25 lb (11.3 kg) of washed clean SSD (saturated surface dry) 3/8" (9 mm) graded aggregate per 50 lb (22.7 kg) bag.
9. After placement, immediately trim the surfaces and edges with a trowel.
10. Minimum application thickness is 1" (25 mm).
11. Forms may be removed after grout has hardened to an initial set.

Note: For installation where acids and sulfates are present, a protective coating is required. Protect uncoated aluminum from direct contact with portland cement-based materials.

JOBSITE TESTING

Jobsite strength tests must use ASTM C-1107 specifications 2" (51 mm) metal cube molds. DO NOT use cylinder molds or plastic cube molds. Control testing based on achieving the desired flow rather than water content.

CURING

Keep exposed edges moist using clean rag, not burlap, for 5-7 hours. Protect from direct sunlight, excessive drying due to elevated temperatures and air movement.

REFER TO:

ACI 308: Standard Practice for Curing Concrete Wet Cure

ACI 308R: Guide to Curing Concrete

CLEANING

Use water to clean all tools immediately after use. Dried material must be mechanically removed.

LIMITATIONS

- Do not overwater.
- Do not use in applications of high dynamic loading.
- Do not allow portland cement-based materials to come in direct contact with uncoated aluminum.
- Do not retemper grout by adding water.
- Do not use as a floor topping or in large areas with an exposed shoulder around base plates.
- Do not add accelerators, retarders, plasticizer or other additives.
- Do not apply in applications thicknesses < 1" (25 mm).
- Do not mix more grout than can be placed in 20 minutes.

Note: Proper application and installation of all ProSpec® products are the responsibility of the end user.

5. AVAILABILITY

To locate ProSpec® products in your area, please contact:

Phone: 800-832-9002

Website: prospec.com

6. WARRANTY

For warranty details, see your sales associate or prospec.com

7. MAINTENANCE

Not applicable

8. TECHNICAL SERVICES

Technical Assistance Information is available by calling the Technical Support Hotline.

Toll Free: 800-832-9023

Fax: 630-952-1235

Technical and Safety Literature

To acquire technical and safety literature, please visit our website at prospec.com.

9. FILING SYSTEM

Division 3

¹ ProSpec® products can contribute to LEED® credits within the Material Resource, (Recycled Content & Regional Materials) and Indoor Environmental Quality (Low Emitting Materials).

10. TECHNICAL DATA

ProSpec® C-1107	Fluid	Flowable	Plastic	Dry-Pack
Mixing Water per 50lb / 22.7 kg	4.1 qt (3.9 L)	3.4 qt (3.2 L)	3.1 qt (2.9 L)	2.9 qt (2.7 L)
Flow	20-30 seconds	125% - 140%	120% - 125%	70% - 80%

Compressive Strength ASTM C109 - Standard Test Methods for Compressive Strength of Hydraulic Cement Mortars

	Fluid 4.6 qt	Flowable 3.8 qt	Plastic 3.6 qt	Dry-Pack 3.4 qt
24 hours	≥ 2,100 psi (14.5 MPa)	≥ 4,400 psi (30.3 MPa)	≥ 5,200 psi (35.9 MPa)	≥ 5,700 psi (39.3 MPa)
3 days	≥ 5,400 psi (37.2 MPa)	≥ 8,500 psi (58.6 MPa)	≥ 8,800 psi (60.7 MPa)	≥ 8,900 psi (61.4 MPa)
7 days	≥ 7,000 psi (48.3 MPa)	≥ 10,200 psi (70.3 MPa)	≥ 10,600 psi (73.1 MPa)	≥ 11,000 psi (75.8 MPa)
28 days	≥ 8,500 psi (58.6 MPa)	≥ 11,700 psi (80.7 MPa)	≥ 12,000 psi (82.7 MPa)	≥ 12,100 psi (83.4 MPa)

ASTM C827 - Standard Test Methods for Measuring Changes in Height at Early Ages of Cylindrical Specimens of Cementitious Mixtures 1

	Fluid	Flowable	Plastic	Dry-Pack
Average Change in Height at Final Set	0.0 to +2.0%	0.0 to +2.0%	0.0 to +2.0%	0.0 to +2.0%

ASTM C1090 - Standard Test Methods for Measuring Changes in Height of Cylindrical Specimens of Hydraulic-Cement Grout 1

	Fluid	Flowable	Plastic	Dry-Pack
1 day	0.0 to +0.25%	0.0 to +0.25%	0.0 to +0.25%	0.0 to +0.25%
56 days	0.0 to +0.25%	0.0 to +0.25%	0.0 to +0.25%	0.0 to +0.25%

ASTM C882 - Slant Shear Bond Strength Modified per ASTM C928

	Fluid	Flowable	Plastic
7 days	≥ 2,000 psi (13.8 MPa)	≥ 2,500 psi (17.2 MPa)	≥ 2,500 psi (17.2 MPa)
28 days	≥ 2,500 psi (17.2 MPa)	≥ 3,000 psi (20.7 MPa)	≥ 3,000 psi (20.7 MPa)

COVERAGE - 50 lb (22.7 kg) BAG YIELDS:

	Fluid	Flowable	Plastic	Dry-Pack
Neat	0.44 ft³ (12.5 L)	0.42 ft³ (11.9 L)	0.41 ft³ (11.6 L)	0.41 ft³ (11.6 L)
Extended 50% with pea gravel	0.62 ft³ (17.6 L)	0.59 ft³ (16.7 L)	0.58 ft³ (16.4 L)	0.58 ft³ (16.4 L)
Density	135.2 lb/ft³ (2.17 kg/L)	139.2 lb/ft³ (2.23 kg/L)	140.1 lb/ft³ (2.24 kg/L)	140.3 lb/ft³ (2.25 kg/L)

Note: Test results obtained under controlled laboratory conditions at 73°F (22.7°C) and 50% relative humidity. More or less water may be required to achieve the desired mixing consistency depending on the atmospheric conditions and job site conditions.

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Data Sheets are subject to change without notice.
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at prospec.com



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