

### 1. PRODUCT NAME

ProSpec® Construction Grout

### 2. MANUFACTURER

Bluestone Products™, a TCC Materials® company  
2025 Centre Pointe Blvd, Suite 300  
Mendota Heights, MN 55120 USA

Phone: 1.651.688.9116  
Fax: 1.651.688.9164  
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### 3. PRODUCT DESCRIPTION

ProSpec® Construction Grout is a non-shrink, non-metallic, Portland cement based mixture of hydraulic cement, aggregate, and additives. ProSpec® Construction Grout can also be used in cold weather when used with ProSpec® Fast-Set Liquid Activator.

#### Features and Benefits

- Interior/Exterior
- Pumpable
- Non-shrink
- Non-corrosive, Non-metallic
- Meets Corps of Engineers Specification CRD-C 621
- Meets ASTM C-1107

#### Uses

For structural grouting and general purpose structural grouting:

- For use above and below grade
- Interior/exterior
- Column bases
- Anchor bolts
- Equipment bases
- Pre-cast wall panels
- Compressors, generators, and pumps
- Steel bearing plates
- Structural columns
- Rebar anchoring
- Baseplates
- Crane rails
- Fill Holes

### SAFETY

READ THE SAFETY DATA SHEET (SDS) BEFORE USING THIS PRODUCT. SDS information is available on our website: [tccmaterials.com](http://tccmaterials.com) or contact TCC Materials® at 651-688-9116 (7:30 AM to 4:00 PM, M-F, Central US Time).

### CAUTIONS

Read complete cautionary information printed on product container prior to use.

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, neither ProSpec® nor TCC Materials® can be responsible for the consequences of variations in such conditions, or for unforeseen conditions.

### 4. TECHNICAL DATA

Typical Values • Construction Grout			
	Plastic	Flowable	Fluid
Mixing Water per 50 lb. (22.7 kg)	7.25 pt. (3.4 L)	8.25 pt. (3.9 L)	9.25 pt. (4.4 L)
Consistency of Flow	110%	130%	25 sec.
Working Time (73°F)	15 min	25 min	>1 hr
Working Time (45°F)	45 min	70 min	>1 hr
Compressive Strength ASTM C109 Standard Test Methods for Compressive Strength of Hydraulic Cement Mortars			
24 hours	3,450 psi (23.8 MPa)	2,450 psi (16.9 MPa)	1,750 psi (12.1 MPa)
3 days	5,600 psi (38.6 MPa)	5,100 psi (35.2 MPa)	4,100 psi (28.3 MPa)
7 days	8,200 psi (56.5 MPa)	7,000 psi (48.3 MPa)	6,200 psi (42.7 MPa)
28 days	10,500 psi (72.4 MPa)	8,500 psi (58.6 MPa)	8,200 psi (56.5 MPa)
Height Change, ASTM C827			
Average Height Change at Final Set	0.45%	0.85%	1.1%

Greater than: > Greater than or equal to: ≥ Less than: < Less than or equal to: ≤

Note: Test results obtained under controlled laboratory conditions at 73°F (22.7°C) and 50% relative humidity.

### LEED® Eligibility<sup>1</sup>

## Product Enhancement



Expansion Stabilization Technology (EST®) – Special additive designed to reduce the potential for cracking and shrinkage.

## Packaging

50 lb. (22.7 kg.) bag (BOM #120720)

## Shelf Life

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

## 5. INSTALLATION

### Preparation

All materials should be conditioned to 40°F–75°F (4°C–24°C) 24 hours prior to installation.

For **cold weather** grouting instructions refer to ProSpec® Fast–Set Liquid Activator data sheet.

Proper surface repair preparation is crucial to achieving a successful application.

- Clean area and remove all loose and unsound materials that will inhibit performance, including grease, oil, paint, dust, or efflorescence.
- Smooth surfaces should be mechanically abraded to open pores.
- Area receive grout should be flushed with clean water to saturate. Remove all standing water prior to grouting.
- Provide air relief holes in forms where necessary.
- 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 build so that the grout can be placed as continuously and expeditiously as possible.

Note: It is the responsibility of the installer/applicator to ensure the suitability of the product for its intended use.

### Refer to:

- ACI 351.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

### Water requirements based on desired grout consistency:

- **Plastic:** 7.25 pt. (3.4 L) of clean potable water per 50 lb. bag (22.7 kg).
- **Flowable:** 8.25 pt. (3.9 L) of clean potable water per 50 lb. bag (22.7 kg).
- **Fluid:** 9.25 pt. (4.4 L) of clean potable water per 50 lb. bag (22.7 kg).

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. Maximum allowable water for mixing is 9.25 pt. (4.4 L).

1. Only mix with clean potable water. Addition of cold water at high temperatures or warm water at low temperatures will aid in adjusting the mix temperature.
2. Place  $\frac{3}{4}$  of the desired mixing water, start mixer then slowly add the dry material. After all of the powder has been added, slowly add the remaining  $\frac{1}{4}$  water until the desired consistency is achieved. Avoid adding excessive amounts of water that promotes segregation or bleeding of the grout. Refer to mixing table in Technical Data section for water requirements. Do not add more water than the amount needed to produce a 20 second flow per Test Method ASTM C939
3. 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. Do not hand–mix.
4. Mix for 3–5 minutes to ensure a uniform lump free consistency and place immediately.
5. Mix no more than can be placed in 15 minutes. Use a mixer large enough to permit continuous placement before any part of the grout has set.
6. Do not retemper once mixed.

## Application

Apply only when air and substrate temperatures are between 45°F–90°F (10°C–32°C) within 24 hours of application and when rain is not expected within 12 hours.

1. Fluid working time at 70°F to >1 hour at 70°F.
2. Pour and place grout from one side of form to eliminate air voids. Agitate material as necessary within its working time to maintain workability. Provide vent holes where necessary. A vibrator, rod, chain, or trowel may be used to assist in consolidating the grout and eliminating air voids. Confine grout to ensure minimum surface exposure. After placement, immediately trim the surfaces and edges with a trowel. Forms may be removed after grout has hardened to initial set.
3. Minimum application thickness is  $\frac{1}{2}$  in. (13 mm); maximum is 4 in. (100 mm).

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 in. (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

Damp cure a minimum of 3 days required to control the non–shrink qualities and maintain strength levels. If temperatures are expected to drop below freezing during the first 3 days, thermal insulation blankets or plastic sheeting should be used. Full cure is reached after 28 days.

### Refer to:

- ACI 308 Standard Practice for Curing Concrete Wet Cure
- ACI 308R Guide to Curing Concrete

## Cleaning

Use clean potable water to clean all tools immediately after use. Dried material must be mechanically removed. Use a waste water hardener (e.g. Conglez™ or similar product) for cementitious waste disposal

## Limitations

- Do not mix more grout than can be placed in 20 minutes.
- Do not apply in applications thicknesses <1/2 in. (13 mm), or greater than 4 in. (100 mm).
- Do not overwater, retemper, or mix with other additives.
- Do use in applications of high dynamic loading.
- Install in accordance with local building codes and applicable ASTM standards.
- Do not allow Portland cement–based materials to come in direct contact with uncoated aluminum.
- 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.
- Mixing time and water amounts should be consistent from batch to batch.
- Grout should be cured for a minimum of 28 days.

## Coverage

50 lb. (22.7 kg) bag yields approximately 0.45 cu. ft. (12.7 L) at a flowable consistency.

## 6. AVAILABILITY

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

Phone: 1.651.688.9116  
Email: info@tccmaterials.com

## 7. WARRANTY

Seller warrants that its product will conform to and perform in accordance with the product specifications. The foregoing warranty is in lieu of all other warranties, expressed or implied, including, but not limited to those concerning merchantability and fitness for a particular purpose. Because of the difficulty in ascertaining and measuring damages hereunder, it is agreed that Seller's liability to the Buyer shall not exceed the total amount billed and billable to the Buyer for the product hereunder.

## 8. MAINTENANCE

Not applicable.

## 9. TECHNICAL SERVICES

Technical Assistance:

Information is available by calling TCC Materials®  
(hours 7:30 AM to 4:00 PM, M–F, CST):

Phone: 1.651.688.9116  
Email: info@tccmaterials.com  
Web: tccmaterials.com

Technical and Safety Literature:

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

## 10. FILING SYSTEM

Division 3

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



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Data Sheets are subject to change without notice. For the latest revision, check our website at tccmaterials.com

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