ProSpec®

HIGH STRENGTH PRECISION GROUT

1. PRODUCT NAME
ProSpec® High Strength Precision 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® High Strength Precision Grout is a specially formulated, ready-to-use, high strength, flowable precision grout.

FEATURES & BENEFITS
- Interior/exterior
- Can be pumped into areas inaccessible by conventional grouting methods
- Combines high fluidity, excellent working time and early strength build ensuring quick job start ups, thereby reducing costs
- High initial and ultimate flexural and compressive strengths
- Non-porous, high density grout resistant to water and salt penetration and damage from freeze/thaw cycles
- Non-shrink, high fluidity and controlled expansion provide full load-bearing coverage
- Non-metallic, non-staining and non-corrosive
- Contains no chlorides or other salts detrimental to reinforcing steel
- Can be extended with proper aggregate by up to 50%
- Conforms to CRD-C621 Corps of Engineers Specification for Non-Shrink Grout and ASTM C-1107

USES
- Precision grouting of machinery bases sole plates, rollingmills, generators, anchor bolts, transfer lines, paper mills and structural grouting of precast columns, crane rails, bridge seats, dowels, etc.
- Grouting applications where shrinkage must be eliminated and corrosion and staining cannot be accepted

Note: To repair voids in concrete due to improper consolidation, use RubCrete or BlendCrete. 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® Eligibility[1]
- Regional Materials (MR-c5)

PRODUCT ENHANCEMENTS
Expansion Stabilization Technology (EST™)
Special additive designed to reduce the potential for cracking and shrinkage.

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
All materials should be stored at 40°F (4°C) to 80°F (27°C) 24 hours prior to installation.
- All grout surfaces must be solid, completely free of oil, wax grease, sealers, paint and other contaminates that may act as a bond breaker.
- Unsound concrete must be chipped away, leaving a rough solid surface ensuring bond.
- Prior to grouting, areas should be saturated with water for 12 - 24 hours after which all excess water is removed. This produces a saturated surface dry (SSD) grouting area.
- Forms must be sealed to prevent water or grout escaping and provide for rapid continuous grout placement. When placing, provide an angle in the forms high enough to assist in grouting.
- For pouring, minimum openings of 3" (76 mm) for entry and 6" (152 mm) for "head" are recommended. Venting must be provided to avoid entrapping air. Forms should be at least 1" (25 mm) higher than the bottom of the base plate.
- Maintain ambient and surface temperatures between 40ºF and 95ºF. Set times and strength developments are dependent on temperature. Hot temperatures will accelerate physical properties while cold will have a retarding effect.

REFER TO:
ACI 305 Standard on Hot Weather Concreting
ACI 306 Standard on Cold Weather Concreting

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.

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

Desired grout consistency

- **Dry-Pack**
  3.9 qt (3.7 L) of clean, potable water per 50 lb (22.7 kg) bag
- **Plastic**
  4.3 qt (4.0 L) of clean, potable water per 50 lb (22.7 kg) bag
- **Flowable**
  4.4 qt (4.2 L) of clean, potable water per 50 lb (22.7 kg) bag
- **Fluid**
  5.3**qt (5.0 L) of clean, potable water per 50 lb (22.7 kg) bag

** Maximum allowable water for mixing. Do not overwater the product.

Note: The water quantities shown are approximate and may vary slightly with type of equipment and application conditions. Do not overwater.

1. Only mix with clean, potable water and/or for thicker applications extend with clean SSD 3/8" (9 mm) pea gravel. 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 using 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.

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

APPLICATION

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

1. Fluid working time 30 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 4" (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

- Forms may be removed after the grout has hardened to an initial set and retains its shape. This time period will vary according to temperature. At this point final finishing and curing can start.
- The grout should slope downward from baseplates or similarstructures at a 45° angle from the lower edge.
- Prevent rapid water loss by covering the exposed grout surfaces with wet burlap during the first 48 hours or apply an acceptable water-based cure and seal agent.

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

	Dry-Pack	Plastic	Flowable	Fluid
Mixing Water per 50 lb/ 22.7 kg	3.9 qt (3.7 L)	4.3 qt (4.0 L)	4.4 qt (4.2 L)	5.3 qt (5.0 L)
Flow	55-70%	120-125%	125-140%	20-30 seconds

Compressive Strength ASTM C109 - Standard Test Methods for Compressive Strength of Hydraulic Cement Mortars				
	Dry-Pack	Plastic	Flowable	Fluid
24 hours	≥ 5,800 psi	≥ 5,200 psi	≥ 4,500 psi	≥ 3,500 psi
3 days	≥ 6,500 psi	≥ 6,100 psi	≥ 5,500 psi	≥ 5,400 psi
7 days	≥ 7,800 psi	≥ 7,100 psi	≥ 6,400 psi	≥ 6,300 psi
28 days	≥ 9,100 psi	≥ 8,300 psi	≥ 7,600 psi	≥ 7,100 psi

ASTM C827 - Standard Test Methods for Measuring Changes in Height at Early Ages of Cylindrical Specimens of Cementitious Mixtures 1				
	Dry-Pack	Plastic	Flowable	Fluid
Average Change in Height at Final Set	**1.8%**	**2.3%**	**2.3%**	**0.9%**

ASTM C1090 - Standard Test Methods for Measuring Changes in Height of Cylindrical Specimens of Hydraulic-Cement Grout 1				
	Dry-Pack	Plastic	Flowable	Fluid
1 day	+0.20%	+0.18%	+0.14%	+0.06%
3 days	+0.21%	+0.19%	+0.15%	+0.06%
14 days	+0.21%	+0.19%	+0.15%	+0.06%
28 days	+0.21%	+0.19%	+0.15%	+0.06%

ASTM C882 - Slant Shear Bond Strength Modified per ASTM C928			
	Plastic	Flowable	Fluid
7 days	≥ 2,300 psi	≥ 2,400 psi	≥ 2,300 psi
28 days	≥ 3,000 psi	≥ 2,900 psi	≥ 2,900 psi

COVERAGE - 50 lb (22.7 kg) BAG YIELDS:				
	Dry-Pack	Plastic	Flowable	Fluid
Density	137.6 lb/ft^3	137.4 lb/ft^3	137.3 lb/ft^3	132.2 lb/ft^3
Yield	0.42 ft^3	0.43 ft^3	0.43 ft^3	0.46 ft^3

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. More or less water may be required to achieve the desired mixing consistency depending on the atmospheric conditions and job site conditions.

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

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