

1. PRODUCT NAME

ProSpec® Precast Mortar 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® Precast Mortar Grout is fast setting, non-shrink, single component, cementitious mortar grout formulated for precast repairs and erections.

FEATURES & BENEFITS

- Interior/exterior
- Excellent hang capability from 1/2" to 3" (13 mm to 76 mm)
- Remains plastic for approximately 30 minutes at 70°F (21°C) allowing shaping and sanding
- Rapid setting
- Non-staining
- Non-shrink
- Non-metallic
- Non-corrosive
- Shavable
- Contains no chlorides or other salts detrimental to reinforcing steel
- Cement-based to ensure substrate compatibility
- Cost effective – no forming needed
- High strength
- Freeze/thaw resistant
- Easy application at Dry Pack and Mortar consistencies

USES

- Patching mortar for use on vertical and overhead concrete and masonry surfaces
- Trowel or hand apply for structural repairs of interior or exterior and above or below grade areas
- Can be used as a bedding mortar, joining vertical and horizontal precast members together
- Restoration of architectural details, bridges, parking structures, tunnels, precast concrete products, retaining walls, balconies, etc.

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

Gray: 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 contaminants that may act as a bond breaker.
- Unsound concrete must be chipped away, leaving a rough strong surface insuring bond. If possible, 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 grouting area (SSD).
- Maintain ambient and surface temperatures between 40° F (4°C) and 100° F (38° C). Set times and strength developments are dependent on temperature.
- Hot temperatures will accelerate physical properties while cold temperatures will have a retarding effect. Completely expose and clean all reinforcing steel, ensuring a minimum clearance of 3/4" (19 mm) behind reinforcing steel.
- Perform reinforcing steel preparation in accordance with International Concrete Repair Institute Technical Guideline No. 03730. For best results patch area edges should be saw cut to a depth of 1/2" (13 mm). Abrade the concrete to obtain a good surface promoting adhesion.

Bond Coat

Mix Precast Mortar Grout to a thin mix consistency and scrub vigorously with a stiff broom or brush into the prepared substrate. Immediately place the mixed Precast Mortar Grout as directed into the wet bond coat (do not allow bond coat to dry before placing mixed Precast Mortar Grout).

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 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 consistency**
4 quarts (3.8 L) per 50 lb bag (22.7 kg)
- **Mortar consistency**
4.5 quarts (4.3 L) per 50 lb bag (22.7 kg)
- **Plastic consistency**
5 quarts (4.7 L) per 50 lb bag (22.7 kg)
- Mix only the amount of material that can be placed in 30 minutes. Pour the required amount of potable water into a clean mixing container, then add the measured amount of Precast Mortar Grout while continuing to mix.
- Blend thoroughly for 2-3 minutes to a lump free, desired consistency. Small amounts of Precast Mortar Grout can be mixed using a trowel or a 1/2" drill (400-600 rpm) and paddle. DO NOT overwater, retemper, over mix or aerate.
- Clean the mixing container thoroughly after each batch to avoid getting hardened mortar into subsequent batches.

APPLICATION

Ideal application conditions are when air, material and substrate temperature are between 40°F (4°C) and 80°F (27°C). For applications outside this range of temperatures, contact ProSpec® Technical Services.

- Hot weather and job conditions above 80°F (26°C) will reduce working time and accelerate set, while cold temperatures below 40°F (4°C) will have a retarding effect.
- When Dry Pack consistencies are required, immediately apply the fresh mortar into the entire surface, forcing Precast Mortar Grout firmly into the previously prepared area insuring full contact with all bonding surfaces.
- Slightly overfill the area and after initial set, using a steel trowel, shave Precast Mortar Grout to the desired final profile, shaving the patch from the center towards the bond edge at the existing surfaces, before the patch hardens insuring that nothing extends over the repair edges. A wet spray may be used for final shaping.
- In deeper areas additional lifts can be made after the original patch has reached initial set. Score and roughen the original lift layer to improve bond between applications.
- Precast Mortar Grout can be placed in lifts up to 5" (127 mm) on vertical and overhead applications by compacting the mortar in place until initial set takes place. In applications where the thickness is greater than 3" (76 mm) up to 33% clean, washed and dried 3/8" (10 mm) pea gravel, based on the weight of the grout may be added. (15 lb (6.8 kg)) pea gravel to 50 lb (22.7 kg) Precast Mortar Grout).
- When placing adjoining precast members use the mortar consistency water level 4.5 qt (4.3 L) to 50 lb (22.7 kg) bag. Place the mortar on the horizontal member and then place the vertical element. Let the mortar reach a shavable consistency and shape as outlined above. A joint striking tool will be helpful to insure a clean seam.

CURING

Cure in accordance with American Concrete Institute Procedure No 308. Keep Precast Mortar Grout moist and protected from high temperature, high wind, low humidity and direct sun causing rapid drying, by covering with wet burlap or plastic for up to 24 hours. A water based curing compound can be used.

REFER TO:

ASTM C1107 Curing method

CLEANING

Clean equipment with water and detergent immediately after use.

COVERAGE

50 lb (22.7 kg) bag yields approximately 0.44 ft³ (0.01 m³).

LIMITATIONS

- Do not apply to frozen or frost covered areas.
- Do not bridge moving cracks, control or expansion joints.
- Do not expose product to conditions that cause early water loss; avoid wind, sunlight and heat.
- Do not apply a thickness less than 1/2" (12 mm).
- Do not apply in thicknesses greater than 1" (24 mm) lifts for overhead applications for a maximum thickness of 3" (36 mm) when forming cannot take place.
- Do not over work, retemper, overwater or add admixtures.

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 Consistency	Mortar Consistency	Plastic Consistency
Mixing Water per 50 lb / 22.7 kg	4.0 qt (3.8 L)	4.5 qt (4.3 L)	5.0 qt (4.7 L)
Curing Method	ASTM C1107	ASTM C1107	ASTM C1107

Time of Setting of Hydraulic Cement by Vicat Needle ASTM C191			
	Dry Pack Consistency	Mortar Consistency	Plastic Consistency
Initial Set	2.5 to 3 hours	3 to 3.5 hours	3.5 to 4 hours
Final Set	3 to 3.5 hours	3.5 to 4 hours	4 to 4.5 hours

Compressive Strength ASTM C109			
	Dry Pack Consistency	Mortar Consistency	Plastic Consistency
1 day	> 4,000 psi (27.6 MPa)	> 3,500 psi (24.2 MPa)	> 2,700 psi (18.6 MPa)
7 day	> 8,000 psi (55.2 MPa)	> 7,000 psi (48.3 MPa)	> 5,900 psi (40.7 MPa)
28 day	> 9,500 psi (65.6 MPa)	> 8,000 psi (55.2 MPa)	> 7,250 psi (50.0 MPa)

Measuring Changes in Height of Cylindrical Specimens from Hydraulic - Cement Grout ASTM C1090			
	Dry Pack Consistency	Mortar Consistency	Plastic Consistency
3 day Expansion	+0.03%	+0.02%	+0.00%
7 day Expansion	+0.03%	+0.02%	+0.01%
28 day Expansion	+0.03%	+0.02%	+0.01%

Change in Height at Early Ages of Cylindrical Specimens from Cementitious Mixtures ASTM C827			
	Dry Pack Consistency	Mortar Consistency	Plastic Consistency
Average Change in Height at Final Set	0.40%	0.70%	0.80%

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 unless otherwise specified. Reasonable variations can be expected due to atmospheric and job site conditions.

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



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