

## 1. PRODUCT NAME

ProSpec® PermaFlex 300

## 2. MANUFACTURER

Bonsal American  
8201 Arrowridge Blvd.  
Charlotte, NC 28273-5678 USA

Tech Services 1.800.334.0784  
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## 3. PRODUCT DESCRIPTION

ProSpec PermaFlex 300 is an economical, one-component, polymer-modified, portland cement-based, tile setting mortar designed for interior and exterior floor applications over concrete.

### Features and Benefits

- Polymer-modified, just add water
- Interior or exterior over concrete floors
- Good workability
- Meets ANSI A118.4 and ISO 13007 C2

### Uses

#### For installation of:

- Porcelain tile
- Ceramic tile
- Quarry tile
- Non-moisture sensitive natural stone\*
- Cement tile

\* All natural stone should be tested to be sure discoloration does not occur.

#### For installation over:

- Properly cured and finished concrete
- Cured portland cement mortar
- Cement backer unit (CBU)
- ProSpec B-6000 Waterproof / Crack Isolation Membrane
- Gypsum plaster or gypsum board (dry areas: wall only)

Note: For other substrates, contact ProSpec Technical Services.

### Safety

READ THE SAFETY DATA SHEET (SDS) BEFORE USING THIS PRODUCT. SDS information is available on our website [www.prospec.com](http://www.prospec.com) or contact CHEMTREC (24 hours availability) 800-424-9300 for International inquiries +011-703-527-3887, or contact Bonsal American Technical Services at 800-334-0784 (8:00 AM to 5:00 PM Eastern US Time).

## 4. TECHNICAL DATA

ProSpec PermaFlex 300	Time	Typical Values	ANSI A118.4
Shear Strength to Glazed Tile	7 days dry	> 390 psi (2.7 MPa)	> 300 psi (2.1 MPa)
Shear Strength to Porcelain Mosaic Tile	28 days dry	> 330 psi (2.3 MPa)	> 200 psi (1.3 MPa)
Shear Strength to Quarry Tile	28 days dry	> 380 psi (2.6 MPa)	> 150 psi (1.0 MPa)

Note: Test results obtained under controlled laboratory conditions at 72°F (22°C) and 50% relative humidity. Tested using 5.27 qts (5.0 L) water per 50 lb (23 kg) bag. Reasonable variations can occur due to atmospheric and job site conditions.

### LEED Eligibility<sup>1</sup>

- Regional Materials (MR-c5)
- Low-Emitting Materials (IEQ-c4.1, IEQ-c4.3)

### Packaging

Gray: 50 lb (22.7 kg) bag - Product #65250311  
White: 50 lb (22.7 kg) bag - Product #65467516

### 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.

## 5. INSTALLATION

### Preparation

- Surface must be clean, dry, hard and free from dirt, loose particles, wax, sealers, curing compounds, grease, paint, efflorescence and any foreign materials that will inhibit adhesion.
- Walls and floors must be structurally sound, free of movement and dimensionally stable.
- Surfaces to receive tile shall be plumb and true with square corners. Maximum variation from the required plane shall be: Subfloor Surfaces – 1/4" (6 mm) in 10' (3 m) for tile less than 15" (381 mm) on any one side and the required plane shall be 1/8" (3 mm) in 10' (3 m) for tile 15" (381 mm) or greater on any one side.
- Concrete floors must be fully cured (28 days) and have a fine broom finish. Sprinkle water on the substrate in various areas looking for penetration. If water droplet or beading of water is noticed then surface contaminants are present that will cause loss of adhesion and must be removed. Smooth troweled surfaces should be scarified to assure bond. Inspect surfaces that will receive the tile and the tools used to install it.

## Preparation (cont.)

- Gypsum substrates on walls must be clean, hard and dust free. Gypsum substrates are not recommended in wet areas.

Notify the architect or other designated authority in writing of any defects or conditions that prevent a satisfactory tile installation. (See ANSI A108.5)

In case of truing or leveling the work of others, use ProSpec Floor Patch Pro, a ProSpec Level Set® Self-Leveling Underlayment or ProSpec Vinyl Concrete Patch.

Expansion joints are necessary for all installations. Expansion joints shall be located (refer to the TCNA Handbook for Ceramic Tile Installation Detail EJ171):

- Where tile work abuts restraining surfaces, such as perimeter walls, curbs, columns, pipes and the like.
- Directly over joints in structural floors and over construction or cold joints.
- Directly over expansion or control joints.
- Where specified in the architectural drawing.

All materials should be stored at 40°F (4°C) to 80°F (27°C) 24 hours prior to installation.

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

## Job Mockups

Bonsal American, Inc. 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

1. Use cool, clean potable water. Always use clean tools and mixing containers.
2. Add just enough dry powder to the liquid to produce a thick but trowelable consistency (5 - 6 qts (4.7 - 5.7 L)) per 50 lbs (22.7 kg). Too much water will cause the mortar to have reduced strength. Troweled ridges should not flow or slump.
3. Mix thoroughly. Let stand 10 minutes to give all ingredients time to slake. Remix and use. Do not add more water or powder after slaking is complete. This causes shrinkage and results in poor bond.
4. Do not mix with a high-speed power mixer. High speed mixing tends to beat in air and reduce the strength of the mortar.
5. The bucket life is approximately 2 - 3 hours, warmer temperatures will reduce bucket life.

## Application

Apply only to surfaces that are frost free and above 40°F (4°C) and below 100°F (38°C) within 24 hours of application and 72 hours thereafter. Installation must conform to the current specifications in ANSI A108.5 and the TCNA Handbook for Ceramic Tile Installations.

1. Select the proper trowel size. The proper trowel is one that will insure a minimum of  $\frac{3}{32}$ " (2 mm) layer of mortar between the tile and substrate after the tile has been set. The proper trowel should also result in a minimum of 80% coverage for interior or dry areas and 95% for exterior, wet areas or with natural stone.
2. With pressure, apply a skim coat to the substrate with the flat edge of the trowel.
3. Comb the mortar in one direction, with the recommended notched trowel. Apply mortar only on sections that can receive tile before skinning. If skinning occurs, scrape and discard skinned mortar.
4. Press tile into place and slide perpendicular to the combed ridges to insure proper coverage.
5. Tile may be adjusted up to 15 minutes after placing.
6. Tile must be firmly set before grouting. This requires at least 16 - 24 hours. At cooler temperatures set times will be extended.
7. Grout with ProSpec ProColor Sanded Grout, ProSpec ProColor Unsanded Grout or ProSpec B-7000 Epoxy Mortar & Grout.
8. Clean all tools with soapy water before mortar dries.

## Limitations

- Do not adjust tile after mortar takes its initial set or the bond will be permanently broken.
- Do not soak tile.
- Do not use worn trowels. It is important to have the ridges of the tile setting mortar the full depth of the trowel notches.
- Do not use over exterior grade plywood, masonite, particle board, luan, plastic, vinyl composition tile, vinyl asbestos tile or painted surfaces.
- Do not use over cut back adhesive.
- Do not use as a medium bed tile setting mortar.
- Do not allow traffic on freshly installed tile for 16 - 24 hours.
- Do not allow heavy traffic until 72 hours after installation of tile.

## Coverage

Coverage per 50 lb (22.7 kg) bag:

ProSpec PermaFlex 300 Notch Trowel Size	Approximate Coverage
1/4" x 1/4" x 1/4" notch trowel (6 mm x 6 mm x 6 mm)	100 - 110 ft <sup>2</sup> (9.3 - 10.2 m <sup>2</sup> )
1/4" x 1/4" x 3/8" notch trowel (6 mm x 6 mm x 10 mm)	80 - 85 ft <sup>2</sup> (7.4 - 7.9 m <sup>2</sup> )

## 6. TECHNICAL SERVICES

### Technical assistance:

Information is available by calling ProSpec Technical Services Hotline (hours 8:00 AM to 5:00 PM EST):

Toll Free: 1.800.334.0784

Fax: 1.704.945.0309

### Technical and safety literature:

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

<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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