3 Contributes LEED Points

ProSpec®

# PERMAFLEX® 300

## Description

ProSpec® PermaFlex 300 is a modified thin set mortar specifically designed for installing tile (including porcelain) over concrete surfaces.

## Features

- C2 performance per ISO 13007
- Polymer modified - just add water
- Excellent workability
- Interior or exterior
- Used to install over concrete substrates
- Excellent grab on vertical surfaces
- Longer open time
- Exceeds ANSI A118.4
- Can be mixed with water or ProSpec additives

## Uses

**For installation of:**

- Ceramic tile
- Pavers
- High bottom lugged tile
- Quarry tile
- Clay bodied tile
- Porcelain tile

**For installation over:**

- Tile backerboard
- Cured portland cement mortar (cured conventional setting beds)
- Gypsum plaster, gypsum block or gypsum board (dry areas: walls only)
- Plumb and true masonry
- Properly cured and finished concrete
- For other substrates, contact the ProSpec Technical Department
- B-6000 Waterproof Membrane

## Technical Data

| | Typical Values | ANSI A118.4 |
|---|---|---|
| Shear Strength to Glazed Tile | | |
| 28 days dry | >390 psi (2.7 MPa) | >300 psi (2.1 MPa) |
| Shear Strength to Porcelain 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) |

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## Preparation

The substrate must be dry, clean, sound and dimensionally stable. It must be free from loose particles, wax, sealers, curing compounds, grease, paint, and efflorescence. Concrete floors must be fully cured (28 days) and have a fine broom finish.

Apply ProSpec PermaFlex 300 only to surfaces that are frost free and above 40° F (4° C) for 72 hours.

Expansion joints are necessary for all installations.

**Expansion joints shall be located (refer to the TCA Handbook for Ceramic Tile Installation):**

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

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

## Mixing

1. Use cool, clean potable water or ProSpec® Latex Additive for mixing. Always use clean tools and mixing containers.
2. Add just enough dry powder to the liquid to produce a thick but trowelable consistency (5 to 6 quarts (4.7 to 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 chemicals time to slake. Remix and use. Do not add more water or dry materials after slaking.
4. Do not mix with a high-speed power mixer. High speed mixing tends to beat in air and reduces the strength of the mortar.
5. Working life in the bucket is approximately 2-3 hours.

## Application

All installations must conform to the current specification in ANSI A108.5 and the TCA Handbook for Ceramic Tile Installations.

1. Select the proper trowel size.

   The proper trowel is one that will insure a minimum of 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, 100% coverage when used on exterior or wet areas.
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, only that part of the bed that can have tile put on it before skinning occurs. If skinning occurs, scrape and discard skinned mortar.
4. Press tile into place and slide the tile perpendicular to the combed ridges to insure proper coverage.
5. Tile may be adjusted up to 15 minutes after placing.
6. Tile floor must be firmly set before grouting. This requires at least 16 to 24 hours.
7. Grout with ProSpec Unsanded Tile Grout, ProSpec Sanded Tile Grout or ProSpec B-7000 Epoxy Grout.
8. Clean all tools with soapy water before mortar dries.

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## Best Performance

- Apply when air or substrate temperature is between 40° F (4° C) and 100° F (38° C) within 24 hours of application. For applications outside this range of temperatures, contact ProSpec Technical Service.
- Mortar should not be exposed to freezing conditions during the first 72 hours of curing. Do not adjust tile after mortar takes its initial set or the bond will be permanently broken.
- Never add water or dry material after the thin set mortar has slaked. This causes shrinkage and results in poor bond.
- Do not soak tile.
- Do not use worn trowels. It is important to have the ridges of the thin set mortar the full depth of the trowel notches.
- Add only cool, clean water or ProSpec Latex Additive.
- Do not allow traffic on freshly installed tile for 16 to 24 hours.

## Colors

White and gray

## Coverage

Coverage per 50 lb. (22.7 kg) bag:
1/4" x 1/4" x 1/4" notch trowel covers approximately 100 to 110 $ft^2$ (9 to 10 $m^2$)
1/4" x 1/4" x 3/8" notch trowel covers approximately 80 to 85 $ft^2$ (7 to 8 $m^2$)
1/2" x 1/2" x 1/2" notch trowel covers approximately 50 to 55 $ft^2$ (4 to 5 $m^2$)

## Packaging

50 lb. (22.7 kg) bag

## Shelf Life

One year from the date of manufacture when stored in the original closed container away from moisture.

## Caution

KEEP OUT OF REACH OF CHILDREN AND ANIMALS. WARNING!

MAY CAUSE SKIN AND EYE BURNS OR IRRITATION.

INHALATION IS KNOWN TO CAUSE CANCER OR DELAYED LUNG INJURY.

Avoid contact with eyes and skin. This product contains hydraulic cement and lime. When mixed with water and/or latex, it results in a solution that is highly alkaline and may burn or irritate the eyes or skin. Wear safety glasses or goggles, protective clothing, shoes and gloves to prevent eye and skin contact. Do not take internally.

Avoid breathing dust. This product contains crystalline silica. Prolonged exposure to crystalline silica dust is known to cause lung cancer or delayed lung injury, including silicosis. Take measures to eliminate or control dust while handling or placing this product. Wear a respirator approved for protection against crystalline silica dust.

Crystalline silica has been classified by IARC and NTP as a carcinogen.

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## First Aid

If swallowed, drink one or two glasses of water to dilute. Do not induce vomiting unless directed to do so by medical personnel. SEEK IMMEDIATE MEDICAL ATTENTION. In case of contact, flush eyes or skin thoroughly for a minimum of 15 minutes with clean water and get prompt medical attention. Wash clothing and thoroughly clean shoes before reuse.

For additional information, call Bonsal American at 704-525-1621 or CHEMTREC at 800-424-9300 or 703-527-3887 outside of the USA.

Refer to Material Safety Data Sheet (MSDS) for further information.

LIMITED 1 YEAR WARRANTY FROM DATE OF MANUFACTURE: Bonsal American warrants that this product and the materials used therein meet or exceed the applicable standards listed and enforced at the time of manufacture. Bonsal American will replace any product or part which proves defective due to quality of ingredients used or due to the manufacturing process itself. This Warranty shall apply only if the product is used in strict accordance with applicable specifications and instructions provided by Bonsal American for its use, and Bonsal American shall not be liable otherwise. Replacement of any defective product, or, at Bonsal Americans option, refund of the purchase of any defective product shall be the buyer's sole remedy under this Warranty, and Bonsal American shall in no event be liable for any damages in excess of the purchase price of the defective product. BONSAL AMERICAN SHALL IN NO EVENT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL OR SPECIAL DAMAGES INCLUDING LOSS OF PROFITS OF ANY KIND. Product demonstrations are done for illustrative purposes only and do not constitute a warranty or warranty alteration of any kind. This Warranty constitutes the sole warranty given by Bonsal American in connection with this product. No modification of this Warranty in favor of any buyer shall be valid unless given in writing and signed by an officer of Bonsal American. Bonsal American has authorized no person to make or give any other warranties or representation, oral or written on its behalf. IN PARTICULAR, THERE ARE NO IMPLIED WARRANTIES, INCLUDING WITHOUT EXCEPTION WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

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