

## MEDIUM BED PERMAFLEX 550

### Description

ProSpec® Medium Bed PermaFlex 550 is a polymer modified portland cement mortar designed for use as a cementitious adhesive bond coat where the final embedded thickness, after tile installation, is between 3/16" to 3/4".

### Features

- C2-E-S1-P1 performance per ISO 13007
- Sets heavy tiles to minimize slump
- Extended open time
- Polymer modified - just add water
- Exceeds ANSI A118.4 and A118.11
- No back buttering required
- Can be used for bedding thickness 3/16" to 3/4"
- Interior or exterior
- Walls or floors
- Helps overcome irregularities in tile thickness

### Uses

#### For installation of:

- Non-warping marble\*
- Slate
- Porcelain tile
- Large ceramic tile
- Quarry tile
- Brick pavers
- Natural stone

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

#### For installation over:

- Countertops
- B-6000 Waterproof Membrane
- Tile backerboard
- Tile over tile
- Properly cured and finished concrete
- Exterior grade plywood (interior floors only)
- For other substrates, contact the ProSpec Technical Department
- Cork underlayment
- Properly prepared cutback adhesive

Technical Data		
	Typical Values	ANSI A118.11
Shear Strength to Porcelain Tile		
28 days dry	350 psi (2.4 MPa)	>200 psi (1.4 MPa)
Shear Strength Quarry Tile to EGP Plywood		
28 days	200 psi (1.4 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 and efflorescence.

#### Concrete

Concrete floors must be fully cured (28 days) and have a fine broom finish.

Apply ProSpec® Medium Bed PermaFlex 550 only to surfaces that are frost free and between 40° F (4° C) and 100° F (38° C) for 72 hours. Expansion joints are necessary for all installations. Expansion joints must conform to the current specification ANSI A108.5 and the TCA Handbook for ceramic tile 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 floors and over construction or cold joints.
- Directly over expansion or control joints.
- Where specified in the architectural drawing.

### Mixing

1. Mix ProSpec Medium Bed PermaFlex 550 with cool clean water.
2. Use clean tools and mixing containers.
3. Add just enough Medium Bed PermaFlex to the water to produce a thick but trowelable consistency (5 qts. (4.7 L) of water per 50 lbs. (22.7 kg)). Too much water will cause shrinkage resulting in loss of bond.
4. Mix thoroughly. Let stand 10 minutes to give all chemicals time to slake. Remix and use. Do not add more powder or liquid after the slake period.
5. Do not mix with a high-speed mixer. High speed mixing tends to beat in air and reduces the strength of the mortar.
6. Working life in the bucket is approximately 2-3 hours.
7. Do not add latex. Mix with water only.

### Application

All installations must conform to the current specification in ANSI A108.5 and the TCA Handbook for Ceramic Tile Installations. It is the user's responsibility to determine the suitability of all substrates and tile (stone) prior to installation with ProSpec® Medium Bed PermaFlex.

1. The proper trowel to be used with ProSpec Medium Bed PermaFlex 550 is a  $19/32$ " half moon trowel and should result in a minimum of 80% coverage interior or dry areas, 100% when used exterior, in wet areas or with marble.
2. With pressure, apply a skim coat to the substrate with the flat edge of the trowel.
3. Comb with the notched side of the trowel only that part that can have tile put on it before skinning occurs. If skinning occurs, scrape and discard skinned mortar.
4. Press tile into mortar with a sliding motion perpendicular to the ridges.
5. Final bond coat thickness must be between  $3/16$ " to  $3/4$ " after the tile is embedded.
6. Level up tile. Tile may be adjusted up to 15 minutes after placing.
7. It is imperative that all marble and natural stone obtain 100% coverage with the Medium Bed PermaFlex 550.
8. Tile floor must be firmly set before grouting. This requires at least 16 to 24 hours.
9. Grout with ProSpec Unsanded Tile Grout, ProSpec ProColor Tile Grout or ProSpec B-7000 Epoxy Grout.
10. Clean all tools with soapy water before mortar dries.



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### Best Performance

- Use only for direct bond adhesive applications.
- Required when setting tiles >15" on any one side and where the final embedded thickness will exceed 3/16" under the stone or tile.
- Do not use when the final embedded bond thickness is <3/16". Use the appropriate PermaFlex polymer modified portland cement mortar.
- **Do not use in truing or leveling underlying substrates.**
- Be sure all substrate tolerances conform to industry standards prior to the installation of tile.
- It is recommended that irregularities in the substrate >1/8" out of plane in 10 feet be corrected using ProSpec Trowel Grade Underlayment, Floor Patch Pro or Level Set 100, Level Set 200 or Level Set 300 underlayment.
- Mortars should not be applied to substrates that are below 40° F (4° C), nor should the mortar 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. After tile beat in, a minimum of 80% coverage is required for interior applications and 100% for exterior applications.
- Add only cool, potable water to ProSpec PermaFlex Medium Bed 550 mortar.
- Do not allow traffic on freshly installed tile for 16-24 hours.
- At cooler temperatures set time will be extended.

### Coverage

Coverage depends on the type and condition of the trowel used and the condition of the substrate. Estimated coverage at 3/8" bedding thickness:

1/2" x 1/2" x 1/2" trowel - approximately 25-30 ft<sup>2</sup> (2.3 to 2.8 m<sup>2</sup>) per 50 lb. (22.7 kg) bag  
19/32" half moon trowel - approximately 25-30 ft<sup>2</sup> (2.3 to 2.8 m<sup>2</sup>) per 50 lb. (22.7 kg) bag

### Packaging

50 lb. (22.7 kg) Gray and 50 lb. (22.7 kg) White

### Shelf Life

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



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## 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.

## 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 American's 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.