



Bosti-Set™

THIN PORCELAIN TILE PANEL ADHESIVE & SOUND REDUCTION MEMBRANE

KEY FEATURES

- Non-sag, single-coat adhesive
- No water or mixing
- Thickness Control™ Spacer Technology

DESCRIPTION

Bosti-Set™ is a one-component, non-sag, easy to trowel adhesive that is specifically formulated for the installation of thin (gauged) porcelain tile panels on interior vertical surfaces or counter tops. Bostik's patent pending Tenirex™ Polymer Technology used in this product is a revolutionary, proprietary formulation found only in Bosti-Set™. Tenirex™ Polymer Technology provides the adhesive remarkable instant grab and holding power, enabling panels to be rapidly set on walls and repositioned for up to 30 minutes with no slip or sag. Bosti-Set™ requires only a single coat in application for faster and easier installation than a conventional mortar installation and holds thin porcelain tiles as large as 1/4" x 5' x 10' (6mm x 1.5m x 3m). Once cured, Bosti-Set™ has a tenacious bond that remains tough yet flexible for durability and sound abatement. This unique formulation is also easy to clean off tile surfaces before and after cure without the need for water or solvents. Bosti-Set™ contains 0% solvents, zero VOC (as calculated per SCAQMD Rule 1168) and is low-odor.

ULTIMATE VERSATILITY

This high-performance formulation may be used to adhere all types of thin porcelain tiles, including fiberglass mesh-backed. It may be used over all properly prepared substrates common to interior wall installations, including the following: gypsum board (drywall), concrete, exterior grade plywood, cement backer board, well-bonded and sound ceramic tile, gypsum, and cement patch, mud-bed/float, fiberglass, epoxy, steel, waterproofing membranes and crack isolation membranes.

THICKNESS CONTROL™ SPACER TECHNOLOGY

Bosti-Set™ contains Bostik's patent-pending Thickness Control™ Spacer Technology. This proprietary feature helps maintain proper adhesive film thickness between the thin porcelain tile and substrate, and ensures a flat installation between lippage control devices.



SOUND REDUCTION CONTROL

Substrate Type*	ASTM E 90 TEST RESULTS	
	Hollow Wall	Wall with Acoustic Insulation
Bosti-Set™ Bonding 3mm Porcelain Tile Panel to Wall Assembly	52	58
Thin Set Mortar Bonding 3mm Porcelain Tile Panel to Wall Assembly	42	45
Wall Only	40	50

* All configurations use 5/8" Type "X" Drywall on 4-7/8" Steel Stud

SUPERIOR SOUND CONTROL

Bosti-Set™ provides a premium sound reduction barrier through walls for tile installations. Independent testing laboratory results are summarized in the table above.

MOISTURE-CURE TECHNOLOGY

Bosti-Set™ is formulated using moisture-cure technology and uses trace amounts of moisture from the substrate and air to cure. Unlike cement mortar installations, moisture is not trapped behind the thin porcelain tile for extended periods of time. Installing with Bosti-Set™ rather than conventional mortars results in a more

flexible and durable bond because of its elastic properties. This technology eliminates water and any mixing that is required during a traditional mortar installation.

LEED® CONTRIBUTION

This zero VOC formulation (as calculated per SCAQMD Rule 1168) may contribute toward LEED® credits under section NC-v4 EQ 4.1: Low-Emitting Materials—Adhesives & Sealants. It also contains 2% recycled rubber material that may contribute to LEED® credits under section NC-v4 MR 4: Recycled Content.

DIRECTIONS FOR USE

Read and understand the technical data sheet completely before beginning installation. Refer to Tile Council of North America (TCNA) and American National Standards Institute (ANSI) for industry standards, as well as the thin porcelain tile manufacturer's recommendations for surface preparation, design, layout and application of materials. If jobsite conditions are outside of the manufacturer's recommendations, take necessary corrective actions.

INSTALLATION PROTOCOL

Install with Qualified Labor: It is strongly recommended to use professional contractors specifically trained to install thin porcelain tile panels.

Surface Preparation: Surfaces must be clean, dry and structurally sound, and free of contaminants, including, but not limited to, dust, dirt, loose particles, rust, mill oil, and all other surface contaminants that may inhibit proper bond. If the substrate is painted or coated, scrape away all loose and weakly-bonded paint or coating. Any paint or coating that cannot be removed must be tested to verify adhesion of the adhesive to determine the appropriate surface preparation, if needed. Substrates are to comply with deflection requirements called for by International Building Code (IBC), International Residential Code (IRC), or applicable local building code. Maximum substrate variation not to exceed 1/8" in 10' (3mm in 3m) and 1/16" in 24" (1.5mm in 60cm) when measured from surface high points with a straight-edge. Areas requiring patching or flattening must be done using a Portland Cement-based material (e.g. Bostik UltraFinish™ Pro, Webcrete® 95, or Webcrete® 98.)

To ensure the substrate is clean and to provide necessary moisture for Bosti-Set™ to cure, just prior to setting the thin porcelain tile, dampen the substrate with water using a damp sponge or mister (no dripping water). This results in a more consistent cure rate throughout the installation.

Note: It is the user's responsibility to determine the condition and suitability of all surfaces before application.

Movement Joints: Refer to Tile Council of North America (TCNA) Detail EJ-171 for industry guidelines. Existing joints in substrate are to be carried through the thin porcelain tiles. Movement joints are required where the thin porcelain tiles meet restraining surfaces (e.g. perimeter walls, curbs, columns, corners, etc.), and at all changes in-plane in the tile work. Joints are to be clean and free of all contaminants.

Adhesive Application: Installations must comply with current revisions of ANSI A108.02, and applicable portions of ANSI A108.5.2. It is only necessary to have one layer of adhesive, and it may be easier to apply directly to the back of the thin porcelain tile panel. Use an appropriate trowel (refer to recommended equipment) to apply the adhesive to the back of the thin porcelain tile panel. A pail scoop (fig. 3) may be helpful to remove the adhesive from the pail. No keying (flat troweling) is required. Apply adhesive to

the perimeter edge of the thin porcelain tile panel first (fig. 4), then comb toward the center (fig. 5) to minimize gaps in coverage. Adhesive ridges on the thin porcelain tile panel back must be parallel to its shortest side (fig. 6). The resulting embedded single adhesive layer will be approximately 1/8" (3mm) thick. Do not allow the adhesive to skin over prior to installing the panel to the wall. See open time chart below.

Recommended Equipment:

OPEN TIME CHART			
Temperature	Humidity		
	40%	60%	80%
60 °F (16 °C)	2.5 Hours	1.75 Hours	1 Hour
70 °F (21 °C)	1.75 Hours	1 Hour	45 Minutes
80 °F (27 °C)	1 Hour	45 Minutes	30 Minutes

NOTE: This chart is for reference only; actual jobsite times may vary.

- 1/2"x15/32" V-Notch Trowel, Euro Notch Trowel or 3/8" Slant Notch Trowel
- Beat-in paddle (fig. 1) or rubber grout float
- Lippage-control device (fig. 2)
- Pail scoop (fig. 3)
- DO NOT use rubber mallets or traditional 2x4 beat-in blocks to avoid damaging the thin porcelain tile.

Setting the Thin Porcelain Tile: Use proper equipment and technique as specified by the thin porcelain tile panel manufacturer to move the thin porcelain tile panel into position and carefully align. Use a rubber grout float or beat-in paddle down the centerline of the thin porcelain tile to firmly set it in place. Do not set the edges of the thin porcelain tile at this time. Detach any equipment from the panel. Place lippage control straps along the edges where adjacent thin porcelain tile will be placed 2"-3" from the corner, and then approximately every 10". Do not place the lippage control cap until the adjacent thin porcelain tile and grout spacers are placed. After placement of the lippage control straps, use a rubber grout float or beat-in paddle to work it from the centerline of the thin porcelain tile outward to the edges to force air from behind and maximize adhesive coverage and transfer to the thin porcelain tile.



FLAME SPREAD/SURFACE BURNING CHARACTERISTICS

	ASTM E 84 Results
Bosti-Set™ adhesive only	Class C
Bosti-Set™ assembly with 3mm porcelain panel tile*	Class A

* Testing of assemblies is specific to the materials used.
For details, please contact Bostik Technical Service at 800-726-7845.

Coverage should be greater than 80%. It is not necessary to vibrate the thin porcelain tile with a sander. Once two adjacent thin porcelain tiles are placed and grout joint spacing is set, assemble caps on lippage control devices and cinch down. Work the edges of the thin porcelain tile between the lippage control devices with the rubber grout float, beat-in paddle or suction cups as necessary to eliminate lippage. Remove excess adhesive from the grout joint (plastic tools, such as a plastic knife, are preferred to minimize the chance of chipping the thin porcelain tile edge), and wipe any adhesive from the face of the thin porcelain tile panel with a dry cloth or Bostik's Ultimate Adhesive Remover. Use of water is NOT recommended for clean up because Bosti-Set™ cures with moisture. Allow the adhesive to cure for 8-12 hours before removing the lippage control devices.

Grouting: Grout application may begin after the adhesive cures for 24 hours. Raking grout joints can be done with a plastic serrated knife. Follow thin porcelain tile panel manufacturer's guidelines for grout type and joint size. Use of a flexible, urethane, pre-mixed grout, such as TruColor® RapidCure™ or Dimension® RapidCure™, is recommended as it will enable the installation to better tolerate expansion, contraction, deflection and impact without cracking. It is also acceptable to use a flexible sealant, such as Bostik's Pure Silicone™, Pro-MS50™ or Tub & Tile™ Caulk. High-performance cement grouts (ANSI 118.7) such as Bostik's Hydroment® Vivid™ are acceptable.

CLEAN-UP

While Bosti-Set™ bonds tenaciously, it is designed to be relatively easy to remove from the thin porcelain tile panel finish, even after cure. Although it is relatively easy to remove after cure, it is recommended to wipe adhesive with a dry, non-abrasive towel as you work prior to cure. After cure, adhesive may be removed with a plastic scraper and a dry, non-abrasive towel, taking care not to damage the finish. Immediately clean all tools and equipment before material cures.

Trowel Clean Up Tip: Before use, cover areas of the trowel that are not used to spread the adhesive with duct tape or blue tape. After use, simply tear off the tape before the material cures, and clean the remainder of the trowel with a towel and mild solvent, such as mineral spirits, acetone or denatured alcohol.

STORAGE, PACKAGING & SHELF LIFE

Shelf life is one year from date of manufacturing in its closed, original packaging. Store at temperatures between 50° F (10° C) and 100° F (38° C).

Re-Seal Partially Used Container: Clean all adhesive residue off of the lip of the pail and the groove around the perimeter of the lid. Plastic (e.g. a trash bag) may be placed into the pail to cover the wet adhesive, especially in high humidity environments, but do not allow the plastic to extend outside of the pail with the lid. Use a rubber mallet to fully seat the lid on the pail. Do not turn the pail over.

Re-Open Partially Used Container: Remove the lid. Peel cured material away from pail and discard cured material and plastic from the top of the pail. Any uncured material may be used.

CHEMICAL & PHYSICAL PROPERTIES




Use Environments	New Construction	Yes
	Remodel	Yes
	Residential	Yes
	Light Commercial	Yes
	Heavy Commercial	Yes
	Offices	Yes
	Hospital	Yes
	Multifamily	Yes
	High-rise	Yes
	Shopping Malls	Yes
	Intermittent wet areas (vertical only)	Yes
	Exterior	No
Submerged	No	
Approved Substrates, Wall Only	Drywall	Yes
	Masonry	Yes
	Roller-applied acrylic waterproofing membranes and sheet membranes	Yes
	Fiberglass	Yes
	Well-bonded clean ceramic tile	Yes
	Exterior Grade Plywood	Yes
	Steel	Yes
	Aluminum	Yes
	Stone	Yes
	Coated Metals	Yes
	Epoxy	Yes
Tile Panel Types	Thin porcelain tile panel	Yes
	Epoxy/Fiberglass-backed porcelain	Yes
	Urethane/Fiberglass-backed porcelain	Yes
	Stone	No
	Ceramic Tile	No
Typical Cured Properties	Hardness (Shore A, ASTM D2240)	52
	Tensile Strength @ break (ASTM D412)	>145 psi
Sound Reduction	Hollow Wall (ASTM E 90)	52
	Wall with acoustic insulation (ASTM E 90)	58
Application Properties	Spread	Easy
	Odor	Mild
	Open/Working Time 70° F (21° C) 50% RH ¹	30-45 min
	Color	White with specs
	Density (lbs/gallon)	12.8
	Percentage of Water ²	0%
	Application Temperature	50° F to 95° F (10° C to 35° C)
	Service Temperature	-30° F to 120° F (-34.4° C to 48.9° C)
	Elongation	>115%
	Skin Time 70° F (21° C) 50% RH	30 min
	Curing time to grout ³	24 hours
Sag - Slip test	<0.1 mm	
Repositioning time	30 min	
Chemical Properties	Adhesive Type	Moisture Cure
	Chemistry Type	1-Part Silyl Modified Polymer
	Solvent percentage	0%
	VOC Compliant (Calculated per SCAQMD Rule 1168)	0 g/L
	Flash Point, closed cup	>200° F (>93.3° C)
LEED® Contribution	EQ 4.1: Low-Emitting Materials: VOC (as calculated per SCAQMD Rule 1168)	0 g/L
	MR 4: Recycled Content	2%

¹ Please refer to the Open/Working Time Chart.

² Per ASTM E203-01 Standard Test Method for water using Volumetric Karl Fischer Titration Method. Results rounded to the nearest tenth. Test Method has error range of +/- 0.2%.

³ Humidity affects cure to a greater degree than temperature; the higher the humidity, the faster the cure.

RECOMMENDED TROWELS FOR MAXIMUM PERFORMANCE

Coverage 20 sf/gallon (0.5 square meters/liter)	Coverage 20 sf/gallon (0.5 square meters/liter)	Coverage 20 sf/gallon (0.5 square meters/liter)
 Euro Notch	 3/8" Slant Notch	 1/2" x 15/32" V-Notch

Trowel size is suggested to maximize adhesive transfer/coverage. Uneven substrate may require the use of a patching material for proper adhesive coverage.

APPLICATION LIMITATIONS

- Bosti-Set™ is not recommended for continuous immersion in water or any other fluid. When fully cured, avoid even incidental exposure to fuels, chlorinated acid and alkaline solutions. Bosti-Set™ is not recommended for exterior or interior installation below the waterline.
- Do not install where thin porcelain tile will come into direct contact with traffic (e.g. floor installations).
- During the curing of Bosti-Set™, do not expose it to alcohol, acids or solvent-based materials.
- Porous materials such as (but not limited to) marble, limestone and granite might absorb components of the Bosti-Set™ leading to staining of the material.
- Lower relative humidity and temperature will significantly extend the curing time. Confined areas, deep joints and moisture barrier substrates may also affect the full cure time and extend it. Apply adhesive in an ambient air temperature between 50°F (10°C) and 95°F (35°C).
- Until the adhesive is fully cured, do not expose it to mechanical stresses.
- Do not install over vinyl or wallpaper.
- Completely remove all adhesive residue and other surface contaminants from the substrate.
- Weight limit for vertical application of thin porcelain tile not to exceed 4.0lb / square foot
- Please refer to the thin porcelain tile panel manufacturer's recommendations for proper handling methods.

PACKAGING

Available in 4-gallon pails, 36 pails/pallet.

CAUTION

IRRITANT. MAY IRRITATE EYES, SKIN OR RESPIRATORY TRACT. CONTENTS MAY BE HARMFUL IF SWALLOWED OR INHALED. Methanol may form during curing. Do not breathe fumes. Do not get in eyes, on skin or on clothing. Do not swallow. Handle with care. Use only in a well ventilated area or wear a mask. Wear protective clothing including gloves. Wash thoroughly after handling. Store in a cool, dry area. Do not reuse container.

KEEP OUT OF REACH OF CHILDREN

FIRST AID TREATMENT

Contains carbon black and quartz silica inextricably bound in a polymer matrix. If in eyes or on skin, rinse with water for at least 15 minutes. If on clothes, remove clothing. If breathed in, move person to fresh air. If swallowed, call a Poison Control Center or doctor immediately. Do not induce vomiting.

SEE SAFETY DATA SHEET

CHEMICAL EMERGENCY: 800-424-9300 (USA),
703-527-3887 (International)

MEDICAL EMERGENCY: 866-767-5089

LIMITED WARRANTY

Limited Warranty found at www.bostik.com/us or call 800.726.7845. TO THE MAXIMUM EXTENT ALLOWED BY LAW, BOSTIK DISCLAIMS ALL OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. UNLESS OTHERWISE STATED IN THE LIMITED WARRANTY, THE SOLE REMEDY FOR BREACH OF WARRANTY IS REPLACEMENT OF THE PRODUCT OR REFUND OF THE BUYER'S PURCHASE PRICE. BOSTIK DISCLAIMS ANY LIABILITY FOR DIRECT, INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES TO THE MAXIMUM EXTENT ALLOWED BY LAW. DISCLAIMERS OF IMPLIED WARRANTIES MAY NOT BE APPLICABLE TO CERTAIN CLASSES OF BUYERS AND SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU. It is the buyer's obligation to test the suitability of the product for an intended use prior to using it. The Limited Warranty extends only to the original purchaser and is not transferable or assignable. Any claim for a defective product must be filed within 30 days of discovery of a problem, and must be submitted with written proof of purchase.

BOSTIK HOTLINE

Smart help
1-800-726-7845

Bostik, Inc.
11320 W. Watertown Plank Road
Wauwatosa, WI 53226
www.bostik.com/us

