



Six Reasons to Use DensShield® Tile Backer

1. **Excellent substrate for floors, walls and countertops**
2. **Built in moisture barrier—stops moisture at the surface**
3. **Mold resistant—when tested, as manufactured, per ASTM D 3273**
4. **Scores and snaps easily with ordinary utility knife**
5. **46% faster to install than cement board—NAHB study**
6. **Lifetime Limited Warranty when used in residential tile installations.***

DensShield® Tile Backer is a substrate that, when properly installed, is virtually unaffected by water or moisture, making it excellent for protecting both tile installations and stud cavities. DensShield is composed of a proprietary, water-resistant treated core that is covered front and back with glass mats. The coated mats are permanently integrated with the core during manufacturing, preventing delamination problems associated with green board. On the face side of DensShield is an exclusive heat-cured acrylic coating stops surface water and retards vapor transmission, protecting the wall cavity and floor substrate. Unlike cementitious

backer boards, DensShield does not require an additional moisture barrier. DensShield is 30% lighter than the leading cement board brands (1/2" comparisons). DensShield provides excellent dimensional stability and strength so it can be installed parallel or at right angles to framing in wall and ceiling applications.

Primary Uses

DensShield Tile Backer has been shown to be excellent for tile and non-tile installations in wet and non-wet applications, in areas of high humidity and in fire-rated assemblies. It is ideal for tile walls, ceilings, countertops and residential and light commercial floor applications in high moisture areas.

DensShield Tile Backer provides an excellent backer for sidewalls and ceilings in bathtubs and shower installations, where it provides an even, solid substrate for tile. DensShield may also be finished with paint or wallpaper for non-tile areas that require superior fire and moisture resistance. Both 1/4" and 1/2" DensShield can be used in floor applications. Both of these thicknesses passed the Robinson Floor Test, the industry standard floor test for light commercial ratings. The Robinson Floor Test (ASTM C 627) is designed to determine how a tile assembly holds up under extreme wear and weight conditions. DensShield achieves the same light commercial rating as cement and fiber cement backers.

**See warranty for complete terms, conditions and limitations.*

Installation Instructions

Tile Applications: Walls and ceilings in bathtubs and showers (DS001)

- Attach DensShield panels with grey side out, away from studs. Tiles should always be applied to grey side. Cut panel to required size and make cutouts. Fit ends and edges closely. Do not leave gaps between panels.
 - For walls, steel or wood framing should be spaced no greater than 16" o.c. for 1/2" DensShield or 24" o.c. for 5/8" DensShield. Board can be applied horizontally or vertically.
 - For ceilings, framing should be spaced no greater than 16" o.c. without blocking or 24" o.c. with blocking. Maximum wall framing spacing with 5/8" DensShield is 24" o.c. with or without blocking. Board should be applied perpendicular to framing on ceilings.
 - For walls and ceilings in either wood or metal framing, fasteners are to be spaced no more than 6" o.c. along framing members. Do not countersink fasteners. Drive fasteners flush with grey-coated surface. For wood studs use galvanized roofing nails, rust-resistant drywall screws or bugle head deck screws. Fasteners should be long enough to penetrate at least 3/4" into the framing member. For metal framing a variety of rust-resistant screws can be used.
 - Do not use additional moisture barrier. DensShield has a heat cured acrylic coating which is a built-in moisture barrier and vapor retarder.
- Apply standard 2" 10 x 10 woven glass mesh tape over joints and angles. Embed the tape with the same material used to set tiles. Do not use all-purpose drywall compound. Use flexible sealant/caulk in corners where adjacent DensShield panels come together.
 - In areas outside the shower where DensShield meets gypsum board, there are two alternatives for finishing the joint.
 - (1) If the tiles fall over the DensShield-to-gypsum-board joint, apply 2" wide 10x10 glass mesh tape and skim with tile setting material (Type I mastic or latex modified thin-set).
 - (2) If the tiles stop before the DensShield-to-gypsum-board joint, apply 2" wide 10x10 glass mesh tape and skim with setting type joint compound to achieve a smooth and paintable surface.

Shower Pan (DS002)

- Install DensShield on walls according to assembly DS001.
- Shower pan or rubber membrane must be adequately sloped to the open drain or weep-hole detail to permit proper water drainage. (Do not install DensShield in the shower pan or use it as a shower base.)
- Do not place DensShield into shower pan mortar bed. Add a bead of flexible sealant between the DensShield panels and the shower pan. Do not use DensShield as a shower floor base or for curbs.

Bath Tub or Shower Receptor

Install DensShield on walls according to assembly DS001

- Leave a 1/8" gap between DensShield and the tub or pan and fill with flexible sealant to prevent water penetration.
- All horizontal surfaces should be sloped toward drain 1/4" per lineal foot.

Residential and Light Commercial Floors

- Laminate DensShield panels, grey coated side up, to subfloor using a latex portland cement mortar liberally applied with minimum 1/4" x 1/4" x 1/4" square-tooth notched trowel. Butt DensShield panels tightly to each other, leaving no gaps between panels. A subfloor of Exposure-1 APA rated plywood floor panels with a thickness of 5/8" is recommended. But exposure-1 APA rated OSB floor panels having a thickness of 3/4" are acceptable. The subfloor should be applied over joists spaced 16" o.c. or engineered lumber spaced 19.2" o.c. maximum with a L/360 deflection limitation for the span, including live and dead loads. Joists can be spaced 24" o.c. maximum when using 7/8" tongue-and-groove plywood subfloor (L/360 deflection limitation).
- Embed DensShield into mortar while still pliant (do not exceed open time). Stagger DensShield joints over subfloor joints. Fasten DensShield panels to subfloor with 1 1/4" galvanized roofing nails or corrosion-resistant screws. Avoid nailing into floor joists on new construction to prevent nail pops. Space fasteners no greater than 8" o.c. in both directions. Drive fasteners flush with the surface—do not countersink. No special or unique fasteners are required.
- Apply 2" wide 10x10 glass mesh tape over joints. Embed with latex portland cement mortar. After setting DensShield panel in thin-set, begin fastening in the center of each panel, working your way to the edges. The application of thin-set over subfloor eliminates any air gaps between the subfloor and the back of DensShield. If this step is not completed, air gaps will cause movement and crack the grout lines.
- Apply flooring-grade tile with latex portland cement mortar. Full-thickness thresholds should be used and butted against the DensShield panels, flush with the tile surface.

Countertops

- Plywood must be installed flat and level.
- Framing spacing should not exceed 24" o.c.
- Install minimum 1/2" exterior-grade plywood on top of supports.
- Provide support on overhangs on cantilever counters to prevent movement.
- Apply leveling bed of latex portland cement mortar to plywood using 1/4" notched trowel.

- Apply clean, dry DensShield to base (grey side up), fastening every 6" to 8" o.c. in both directions into sub-floor while leveling bed is still fluid. Use either 1 1/4" galvanized roofing nails or 1 1/4" Type W rust-resistant drywall screws.
- Stagger joints of DensShield panels with those of the plywood base.
- Butt DensShield joints tightly. Tape all joints and corners using 2" wide, self-adhering, fiberglass mesh tape. Embed tape with latex portland cement mortar that meets ANSI A118.4.
- Install tile, expansion and control joints and grout in accordance with ANSI A108. Use latex portland cement mortar to set tile.

Limitations

- Apply tile only to grey coated side of DensShield panels.
- Do not use DensShield in commercial saunas, steam rooms, around fireplaces or areas where prolonged exposure to heat exceeds 125°F.
- DensShield should not be used as a shower pan base.
- DensShield should not be used for exterior installations.
- DensShield should not be used as a base for nailing and mechanical fastening.
- DensShield should not be used in conjunction with passive solar heat systems.
- For floors, use floor grade tile, 2" x 2" or larger.
- Adhesives alone should not be used to install DensShield. Nails or screws may be used alone or in combination with adhesives.
- Since DensShield has a built-in moisture barrier, never install vapor retarders directly behind the Tile Backer. In retrofit applications, some paints or other wall covering may constitute a vapor barrier; remove or effectively penetrate these coverings prior to installing DensShield.
- DensShield should not be used in shower floors or curbs or horizontal surfaces such as seats, unless properly treated with a water-proof membrane per TCA recommendations.

Product Data

Thickness:

- 1/4" — 6.4mm
- 1/2" — 12.7mm
- 5/8" — 15.9mm, Type X

Width and Length:

- 4' x 4' (1/4"); 32' x 5' (1/2");
4' x 5' and 4' x 8' (1/2");
- 4' x 8' (5/8")

Edges:

- Square

Conforms to ASTM C 1178 Glass Mat Water-Resistant Gypsum Backing Panel



SALES INFORMATION AND ORDER PLACEMENT

U.S.A. Midwest: 1-800-876-4746 West: 1-800-824-7503
South: 1-800-327-2344 Northeast: 1-800-947-4497

CANADA Canada Toll Free: 1-800-387-6823
Quebec Toll Free: 1-800-361-0486

TECHNICAL INFORMATION

G-P Gypsum Technical Hotline
U.S.A. and Canada: 1-800-225-6119
Mon.-Fri., 8 a.m.-6 p.m. ET
www.DensShield.com

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LIMITATION OF REMEDIES AND DAMAGES Our sole liability for any product claim shall be limited to reimbursement of the cost of repair or replacement of the affected product, up to a maximum amount of two times the original purchase price for the affected product. We shall not be responsible under any circumstances for lost profits, damage to a structure or its contents, or indirect, incidental, special or consequential damages. Claims shall be deemed waived if they are not submitted to us in writing within ten days after discovery.

SAFETY CAUTION: This product contains fiberglass. Fibers and dust may be released from this product during normal handling and may result in skin, eye and respiratory irritation. Avoid breathing dust and contact with the skin and eyes.

Follow these standard work practices: Wear a loose-fitting, long-sleeved shirt and long pants, protective gloves and eye protection (goggles or safety glasses with side shields). Wear a dust mask when sanding. Additional protection may be needed when very dusty. Do not use a power saw. For Material Safety Data Sheet or additional information, call 1-800-225-6119 or visit our Web site.

