Georgia-Pacific

DensShield®

Tile Backer



Installation Guide

With its built-in moisture barrier, DensShield® Tile Backer offers contractors, tile installers, and DIY's a smarter, more efficient solution. Whether you're working on walls, ceilings, floors or countertops, DensShield® Tile Backer delivers proven reliability and performance.

6 Reasons Pros Choose DensShield® Tile Backer

1. Moisture Resistant
Ideal for high-moisture areas, DensShield® Tile Backer eliminates the need for a separate moisture barrier. The built-in moisture-resistant coating stops water at the surface, streamlining the installation process, saving valuable time and reducing the added cost of installing a secondary waterproofing membrane for cement or fiber cement boards.

2. Lightweight
DensShield® Tile Backer weighs approximately 20% less than the leading cement board and approximately 25% less than the leading fiber cement board[1].

3. No Special Tools
With DensShield® Tile Backer, cutting is as simple as scoring and snapping with a standard utility knife, while cutting cement and fiber cement boards often requires a carbide tip saw. Additionally, no special fasteners are required. See the Technical Guide for more information.

4. Faster Install
DensShield® Tile Backer accelerates the installation process being lighter, easier to handle and requiring fewer materials than competing cement and fiber cement products, so contractors can save time without sacrificing performance.

5. Mold Resistant
Tested as manufactured per ASTM D 3273 standards, DensShield® Tile Backer scored a 10 – the highest possible level of mold resistance.

6. Trusted Durability
Backed by a Lifetime Limited Warranty for residential tile installations and a 20-year Limited Warranty for commercial applications[2].

VIEW INSTALLATION VIDEO

1. Source: Installation Guide for DUROCK® Cement Board (Lit #CB237EN; Printed 11/11); Submittal Sheet for DUROCK® Cement Board (Lit #CB399; Printed 11/11)
2. See warranty for complete terms, conditions and limitations. Visit our website at buildgp.com/densshield for complete DensShield® information or product warranty information.



Tools and Materials Required

For all Applications:

- DensShield® Tile Backer
- Utility Knife
- Drill or Hammer
- Fasteners (see fastener chart for more information)
- Modified Thin Set
- Trowel or taping knife
- Alkali-resistant fiberglass mesh tape
- Tile
- Grout

For Wet Areas:

- Flexible sealant ASTM C920 Type S, Grade NS, Class 25 or higher
- Caulk Gun

For Floors:

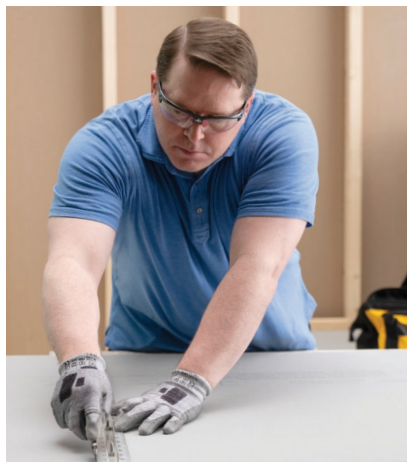
- Notched Trowel ¼" x ¼"

For Cutting Penetrations:

- Keyhole Saw
- Hole Saw
- Oscillating Saw.

Dry Area
Walls or Ceilings

½" (12.7 mm) and 5/8" (15.9 mm) DensShield® Tile Backer can be used as a tile substrate in residential and commercial wall applications.



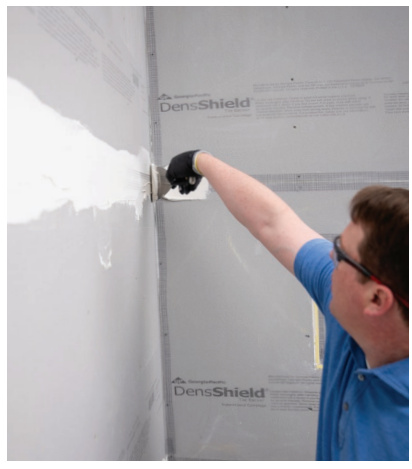
1 Cut DensShield® Tile Backer using a utility knife to score and then snap, starting with the gray face side. Cuts for penetrations can be made with a jab saw, hole saw or oscillating saw.



2 Attach DensShield® Tile Backer with gray side facing outward. Fasten to wood or metal framing with drywall screws or galvanized roofing nails placed a maximum of 8" (203 mm) o.c. for walls and ceilings. Drive fasteners flush with the gray surface and do not countersink. Installed board edges and ends should be butted tightly together.



3 Apply alkali-resistant self-adhesive 2" (51 mm) wide fiberglass mesh tape on all panel seams and corners.



4 Embed tape with modified thin set.

Wet Area Walls or Ceilings

1/2" (12.7 mm) and 5/8' (15.9 mm) DensShield® Tile Backer can be used as a tile substrate in residential and commercial wet wall applications.



1 Cut DensShield® Tile Backer using a utility knife to score and then snap, starting with the gray face side. Cuts for penetrations can be made with a jab saw, hole saw or oscillating saw.



2 Attach DensShield® Tile Backer with gray side facing outward. Fasten to wood or metal framing with corrosion resistant screws spaced a maximum of 8" (203 mm) o.c. for walls and ceilings. Drive fasteners flush with the gray surface and do not countersink.



3 Apply flexible sealant to panel edges before placing adjacent panels. Fit panel edges closely, leaving no gaps between panels. Clean any excess sealant from panel surface after fastening.



4 Apply alkali-resistant self-adhesive 2" (51 mm) wide fiberglass mesh tape on all panel seams and corners.



5 Embed tape with modified thin set.





6 Caulk or seal around plumbing penetrations and abutments to dissimilar materials.

Residential and Light Commercial Floors

¼" (6.4 mm) and ½" (12.7 mm) DensShield® Tile Backer can be used as a tile underlayment in residential and light commercial floor tile applications as defined in the TCNA Handbook for Ceramic, Glass, and Stone Tile Installation, published by the Tile Council of North America.



1 Cut DensShield® Tile Backer using a utility knife to score and then snap, working from the grey face side. Cuts for penetrations can be made with a keyhole saw, hole saw or oscillating saw.

Starting with a clean, dry and level wood subfloor, spread modified thin set with a minimum ¼" × ¼" (6.4 × 6.4 mm) square-tooth notched trowel.

Embed DensShield® Tile Backer with the gray, coated side facing up to into mortar while still pliant (do not exceed open time). Stagger DensShield® Tile Backer joints so as not to align with subfloor joints.

Board edges and ends should be butted tightly together. Leave no gaps between panels.



2 Fasten panels to subfloor with galvanized roofing nails, corrosion-resistant screws or staples. (Refer to Fastener Chart)

Begin fastening in the center of each panel, working your way to the edges. Avoid nailing into floor joists on new construction to prevent nail pops.

Space nails or screws no greater than 6" (152 mm) o.c. in both directions. Drive fasteners flush with the gray surface. Do not countersink.



3 Apply 2" (51 mm) wide alkali-resistant fiberglass mesh tape over joints. Embed tape with modified thin set.

Apply flooring-grade tile with modified thin set mortar. Full-thickness thresholds should be used and butted against the DensShield® panels, flush with the tile surface.

Use a 2" × 2" (51 × 51 mm) or larger floor-grade tile. Use either standard floor grout (ANSI A118.6) or polymer-modified grout (ANSI A118.7).

Fastener Chart

Wet Areas (i.e., Shower and Tub Surrounds)

Application	DensShield® Tile Backer Thickness	Fastener Type	Minimum Fastener Length	Fastener Spacing
Walls and ceilings over wood framing	½"	Deck Screws or Exterior Screws, Ceramic coated*, bugle head	1-¼" (32 mm)	8" (203 mm) o.c. along framing
Walls and ceilings over wood framing	5/8"	Deck Screws or Exterior Screws, Ceramic coated*, bugle head	1-¾ " (45 mm)	8" (203 mm) o.c. along framing

Floors

Application	DensShield® Tile Backer Thickness	Fastener Type	Minimum Fastener Length	Fastener Spacing
Floors over wood subfloor	¼" & ½"	Drywall screws – bugle head, rust resistant*, coarse thread, sharp point screw	1-¼" (32 mm)	6" (152 mm) in all directions
Floors over wood subfloor	¼" & ½"	Galvanized* roofing nail	1-¼" (32 mm)	6" (152 mm) in all directions
Floors over wood subfloor	¼"	¼" (6 mm) Crown staple, corrosion resistant* chisel point	7/8" (922 mm)	6" (152 mm) in all directions

*Contact fastener manufacturer for proper level of corrosion resistance.
Screws should meet ASTM C1002 or ASTM C954

Dry Areas (i.e., Backsplashes, Countertops and Ceilings)

Application	DensShield® Tile Backer Thickness	Fastener Type	Minimum Fastener Length	Fastener Spacing
Walls and ceilings over wood framing	½"	Galvanized* roofing nail	1-½" (38 mm)	8" (203 mm) o.c. along framing
Walls and ceilings over wood framing	5/8"	Galvanized* roofing nail	1-¾ " (45 mm)	8" (203 mm) o.c. along framing
Walls and ceilings over wood framing	½"	Drywall screws – bugle head, rust resistant*, coarse thread, sharp point screw	1-¼" (32 mm)	8" (203 mm) o.c. along framing
Walls and ceilings over wood framing	5/8"	Drywall screws – bugle head, rust resistant*, coarse thread, sharp point screw	1-5/8" (41 mm)	8" (203 mm) o.c. along framing
Walls and ceilings over wood framing	½"	Drywall screws – bugle head, rust resistant*, coarse thread, sharp point screw	1-¼" (32 mm)	8" (203 mm) o.c. along framing
Walls and ceilings over wood framing	5/8"	Drywall screws – bugle head, rust resistant*, coarse thread, sharp point screw	1-5/8" (41 mm)	8" (203 mm) o.c. along framing

Additional Information

Walls and Ceiling Information

Transitions to areas outside the shower where DensShield® Tile Backer meets gypsum board:

(A) If the tiles fall over the DensShield® Tile Backer-to-gypsum board joint, apply 2" (51 mm) wide alkali-resistant fiberglass mesh tape and skim with polymer-modified thin set (meeting ANSI A118.4).

(B) If the tiles stop before the end or edge of the DensShield® Tile Backer-to-gypsum board joint, apply 2" (51 mm) wide alkali-resistant fiberglass mesh tape and skim with setting-type joint compound to achieve a smooth and paintable surface.

(C) For non-tiled areas that will not be exposed to moisture, all-purpose joint compound may be used.

Framing can be nominal 2"× 4" wood or minimum 20-gauge steel.

For ½" (12.7 mm) DensShield® Tile Backer, framing can be 16" (406 mm) o.c. without blocking or up to 24" (610 mm) with blocking at all joints.

For 5/8" (15.9 mm) DensShield® Tile Backer, framing should be spaced no greater than 24" (610 mm).

DensShield® Tile Backer can be applied horizontally or vertically on walls.

For ceilings, framing should be spaced no greater than 12" (305 mm) o.c. for ½" (12.7 mm) or 16" (406 mm) o.c. for 5/8" (15.9 mm) thickness. On ceilings, DensShield® Tile Backer should be applied perpendicular to framing.

DensShield® Tile Backer on Horizontal Surfaces

Horizontal surfaces in wet areas such as shower benches or niches require a waterproofing system applied to the surface of DensShield® Tile Backer and any exposed gypsum core.

DensShield® Tile Backer can be used as a substrate in a one-coat float wall assembly.

Attach a cleavage membrane or optional waterproof/vapor retarder membrane to the face of DensShield® Tile Backer. Attach metal lath over the membrane and DensShield® Tile Backer and into the framing. DensShield® Tile Backer is not a nail base. Apply mortar bed per TCNA Handbook for Ceramic, Glass, and Stone Tile Installation assembly W222, B440 or B441.

Flooring Information

The application of thin set over subfloor provides a leveling bed between the subfloor and the back of DensShield® Tile Backer. If this step is not completed, air gaps can cause movement and crack the grout lines. (This step is common with all other backer board products.)

Minimum Subfloor Thickness
Maximum Joist Spacing

5/8" (15.9 mm) plywood Sturd-I-Floor®*
16" (406 mm) o.c. joists

¾" (19 mm) plywood Sturd-I-Floor®*
19.2" (488 mm) o.c. engineered lumber

7/8" (22.2 mm) APA-rated Sturd-I-Floor®
24" (610 mm) o.c. engineered lumber

Design floor areas over which tile is to be applied to have a deflection not greater than L/360 of the span when measured under 300 lbs. (136 kg.) concentrated load (see ASTM C627) or as required by code or tile manufacturer. Maximum variation in the subfloor surface shall not exceed ½" (13 mm) in 10' (3,048 mm) from the required plane or as required by design/code.

DensShield® Tile Backer can be used in conjunction with radiant heated floor systems up to 125F (52C) continuous temperature.

Floor-grade tile should be used on flooring applications.

Do not use organic adhesive mastics for floor or wet area applications.

DensShield® Tile Backer can also be used as a tile substrate for interior countertops. Provide support for overhangs on cantilevered countertops to prevent movement. Follow flooring installation methods for installation guidance.

*¾" (19 mm) OSB is acceptable

Additional Information

Walls and Ceiling Information

Transitions to areas outside the shower where DensShield® Tile Backer meets gypsum board:

(A) If the tiles fall over the DensShield® Tile Backer-to-gypsum board joint, apply 2" (51 mm) wide alkali-resistant fiberglass mesh tape and skim with polymer-modified thin set (meeting ANSI A118.4).

(B) If the tiles stop before the end or edge of the DensShield® Tile Backer-to-gypsum board joint, apply 2" (51 mm) wide alkali-resistant fiberglass mesh tape and skim with setting-type joint compound to achieve a smooth and paintable surface.

(C) For non-tiled areas that will not be exposed to moisture, all-purpose joint compound may be used.

Framing can be nominal 2"× 4" wood or minimum 20-gauge steel.

For ½" (12.7 mm) DensShield® Tile Backer, framing can be 16" (406 mm) o.c. without blocking or up to 24" (610 mm) with blocking at all joints.

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Horizontal surfaces in wet areas such as shower benches or niches require a waterproofing system applied to the surface of DensShield® Tile Backer and any exposed gypsum core.

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Maximum Joist Spacing

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24" (610 mm) o.c. engineered lumber

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Floor-grade tile should be used on flooring applications.

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DensShield® Tile Backer can also be used as a tile substrate for interior countertops. Provide support for overhangs on cantilevered countertops to prevent movement. Follow flooring installation methods for installation guidance.

*¾" (19 mm) OSB is acceptable

Additional Information

Indoor Pool Enclosures & Similar High Humidity Non-Tile Areas

For areas exposed to continuous, higher-than-normal moisture levels, such as those found in swimming pool enclosures, garden areas, therapy rooms, locker rooms, laboratory white rooms, operating rooms, commercial and institutional kitchens.

Do not install a vapor retarder behind DensShield® Tile Backer unless the system has been designed and hygrothermal modeled by an engineer or design professional.

Using DensShield® Tile Backer in high humidity areas typically requires a topically applied highly resistive barrier finish system to create a moisture barrier in conjunction with DensShield® Tile Backer of less than 1.0 perms (57 ng/Pa·s·m2).

Dry Non-Tile (Painted Areas)

This installation should be used in interior non-wet areas that do not come in contact with water, but, may experience intermittent exposure to high levels of humidity for short periods of time, such as laundry rooms, powder rooms and kitchens. For walls, wood or 25-gauge minimum steel framing should be spaced no greater than 16" (406 mm) o.c. for ½" (12.7 mm) DensShield® Tile Backer or 24" (610 mm) o.c. for $^{5}/_{8}$" (15.9 mm) DensShield® Tile Backer. For ceilings, boards should be spaced no greater than 16" (406 mm) o.c. for ½" (12.7 mm) thickness or 24" (610 mm) o.c. for 5/8" (15.9 mm) thickness.

Apply fiberglass mesh tape over joints and angles. Embed tape in setting type compound. Trowel all purpose or a setting type joint type compound over entire DensShield® Tile Backer panel to produce a smooth surface. Prior to painting or papering, the surface should always be primed with a primer suitable for high-moisture areas, as recommended by the paint or wallpaper manufacturer for applications over joint compound.

Shower Pans and Bathtubs

The shower pan or rubber membrane must be adequately sloped to the open drain or weep-hole detail to permit proper water drainage.

Wood or other satisfactory blocking should be applied at the bottom framing to support the vertical sides of the shower pan or membrane and DensShield® Tile Backer.

To compensate for the tub flange, a furring strip may be added to the framing members. This enables DensShield® Tile Backer to be installed within $^{1}/_{8}$" (3 mm) from the top of the tub.

Do not place DensShield® Tile Backer into a conventional shower pan mortar bed. Leave a minimum $^{1}/_{8}$" (3 mm) gap and fill with flexible sealant. In addition, fasten DensShield® Tile Backer directly above the shower pan membrane.

To prevent water penetration, completely fill the minimum $^{1}/_{8}$" gap between tile and tub/shower pan with flexible sealant.

For showers with curbs, apply waterproof membrane up walls a minimum of 2" (51 mm) and a maximum of 4" (102 mm) above curb height. Do not use DensShield® Tile Backer in the curb.

For showers without curbs, apply waterproof membrane up walls a minimum of 6" (152 mm) and a maximum of 8" (203 mm).

It’s Really That Easy

With DensShield® Tile Backer, you can trust in a product that’s as simple to install as it is effective. From its lightweight design to its moisture-resistant features, DensShield® panels saves time and effort while delivering lasting performance.

DensShield® Tile Backer–
it’s ready for what’s next.



It's ready for what's next

Helps make every project easier, faster and more reliable. DensShield® Tile Backer delivers the strength and durability professionals count on, whether it's for floors, walls or ceilings. Choose DensShield® Tile Backer — a smarter, more efficient way to build with confidence.

Ready to Learn More?

For additional details and guidance, refer to the following resources:

Overview Brochure
Product highlights, key features and benefits, and ideal applications

Q&A Brochure
Answers to the most commonly-asked install and application questions

Technical Guide
Physical properties, product limitations, testing data and fire safety information

Warranties
Find warranties for residential and commercial construction

Find these resources and more information about DensShield® Tile Backer at **www.buildgp.com/densshield.**

Questions? Connect with our Sales and Technical Team:

U.S.A.

North:	1-800-947-4497
South:	1-800-327-2344
Central:	1-800-231-6060 x 7709
Midwest:	1-800-876-4746
Pacific Northwest:	1-800-444-0092
Pacific Southwest:	1-800-824-7503

CANADA
Canada Toll Free:
1-800-387-6823

TECHNICAL HOTLINE
U.S.A. and Canada:
1-800-225-6119

Georgia-Pacific
Building Products

For full warranty information, refer to the DensShield® Tile Backer Limited Warranty

For product fire, safety and use information, visit **www.buildgp.com/safetyinfo**

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