

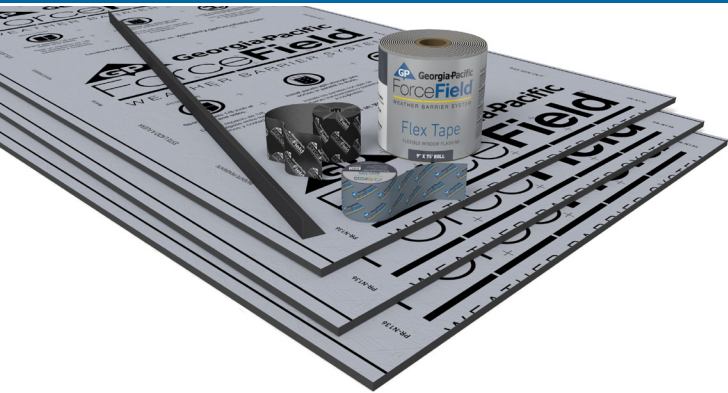


INSTALLATION INSTRUCTIONS

FOR RESIDENTIAL PROJECTS



PRODUCT OVERVIEW



The Smarter Sheathing System for Your Builds

From weather issues to jobsite headaches, your builds are up against enough challenges that lead to costly delays.

ForceField® Weather Barrier System from Georgia-Pacific delivers a superior level of protection from the elements and eliminates the need for house wrap. ForceField Panels and accessories create a continuous air and water-resistive barrier that can help reduce weather-related interruptions and damage while increasing the quality and integrity of your structures.

ForceField Panels made with DryGuard® Technology* are at the core of this weather barrier system from Georgia-Pacific, allowing you to dry in a building quickly without sacrificing quality. These engineered wood sheathing panels have an enhanced* overlay that helps to keep water out while allowing water vapor to escape.

ForceField accessories feature an innovative design, working with the panels to create a continuous barrier that protects your builds against weather delays.

Code Compliance

ForceField® Weather Barrier System is recognized by the APA-The Engineered Wood Association Product Report PR-N136 as a building code-compliant and energy code-compliant structural wood sheathing, water-resistive barrier and air barrier. The basis of recognition for the ForceField Weather Barrier System to be used as a water-resistive barrier are IBC Section 104.11 and IRC Section R104.11 (alternative materials to the water-resistive barrier requirement defined in IBC Section 1404.2 and IRC Section R703.2). The ForceField Weather Barrier System also serves as a continuous air barrier as prescribed by the 2012 IECC, Section C 402.4 air leakage, for both materials, C 402.4.1.2.1, and assemblies, C402.4.1.2.2, provided the panel seams, rough openings and penetrations are properly sealed.

* Features described here may not be available in all geographic markets. Consult your Georgia Pacific Company sales office or representative for more information.

Storage and Handling

To assure optimum performance, ForceField® Panels must be stored and handled properly. Adhering to the following guidelines will help protect panels from damage in storage, during shipment and on the jobsite.

Handling in Transit: Take precautions to protect panel ends and edges during shipment. If ForceField Panels are shipped on open truck bed, cover them with a tarp. For open railcar shipment, use lumber wrap to keep panels dry and clean.

Storage in the Yard and on the Jobsite: Whenever possible, store ForceField Panels under a roof. Use pieces of lumber to weight down the top panel in a stack to reduce warpage from humidity. If moisture exposure is expected, cut steel bands on bundles to prevent edge damage.

Outside Storage: If ForceField Panels must be stored outside, stack them on a level platform supported by at least three 4x4s to keep them off the ground. Place one 4x4 in the center and the other two 12 to 16 inches from the ends. Never leave panels or the platform in direct contact with the ground. Cover the stacks loosely with plastic sheets or tarps. Anchor the covering at the top of the stack but keep it open and away from the sides and bottom to ensure good ventilation. Tight coverings prevent air circulation and when exposed to sunlight may promote mold or mildew.

ForceField Weather Barrier System Accessories: Store in a cool, dry place out of direct sunlight.

Safety

Follow all OSHA regulations and other safety practices when installing the ForceField® Weather Barrier System. Wear appropriate safety equipment including but not limited to safety helmets, eye protection, cut resistant gloves, safety belts, harnesses and other fall protection. Do not install in rain, snow, frost or other weather that might result in slippery conditions.

Tools: Tape measure, cutting tool (knife), saw, straight edge, chalk box, J-roller, pneumatic nail gun and air line regulators, flush drive adaptors for nail guns, air compressor, speed square, sausage gun.

Layout: Install ForceField Panels according to APA Engineered Wood Construction Guide Form No. E30 requirements. Inspect panels for damage prior to installation. Refer to the ForceField Repair Guide for more information.

FORCEFIELD® WEATHER BARRIER SYSTEM COMPONENTS

ForceField® Seam Tape Plus

High-performance polypropylene film with a proprietary adhesive offers excellent durability and tear resistance once installed. With its increased breaking strength and elongation, ForceField Seam Tape Plus is recommended in residential projects greater than two stories.

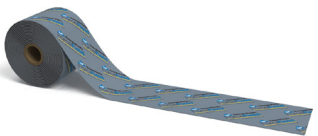
Roll Size: 3.5" wide x 90' long
Thickness: Minimum 0.006 inch
Packaging: 12 rolls per case



ForceField® Seam Tape

A pressure-sensitive polymeric film with an acrylic adhesive for sealing joints in the ForceField Weather Barrier System. ForceField Seam Tape tears easily for a quicker install and is ideal for residential construction projects.

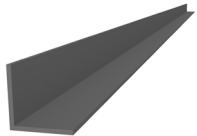
Roll Size: 3" x 180'
Thickness: Minimum 0.003 inch
Packaging: 8 rolls per case



ForceField® Corner Seal

An innovative solution from Georgia-Pacific to help protect your home or building against the harmful effects of nature. The product is a 4" wide, semi-rigid polypropylene with a "living hinge" which allows it to be used for both inside and outside exterior corners. Once installed, the ForceField Corner Seal helps provide additional protection against air and moisture intrusion in what are typically some of the most difficult areas of a home to seal.

Roll Size: 4" x 200'
Thickness: Minimum 0.03" inch
Packaging: 1 roll per case



ForceField® AT Flashing

A pressure-sensitive block copolymer adhesive-based product designed to adhere to construction surfaces without primer or conditioning. It is used for sealing openings and material transitions and provides protection from air and moisture.

Roll Size: 4" x 75'
Thickness: Minimum 0.012 inch
Packaging: 4 rolls per case



ForceField® Flex Flashing

Available in 6" and 9" widths, ForceField Flex Flashing is a conformable self-adhered flashing tape ideal for use on curved openings and for window sill pan flashing. It is a two-ply oriented high-density film mated to a premium butyl rubber adhesive and release sheet.

Roll Size: 6" x 75' / 9" x 75'
Thickness: Minimum 0.012
Packaging: 2 rolls per case





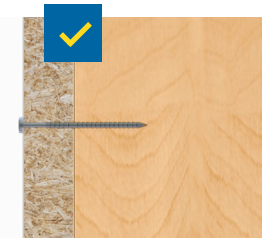
For detailed instructions on general wall sheathing panel installation, please refer to the APA Engineered Wood Construction Guide, Form No. E30, available in the publication section of apawood.org. For support and nail spacing, refer to Table 23, and for additional information on wall bracing in high-wind or seismic loading areas, refer to Table 28 of the guide.

Installing the Panels

- Align the panels either vertically or horizontally with the framing so the gray overlay side of the ForceField® Panels face out. Spacing of 1/8" between the panels should be maintained at all edges and end joints.
- Fasten panels according to project specifications and local building code requirements. General fastening guidelines for wood sheathing are to use a minimum 6d common nail spaced 6" o.c. along panel edges and 12" o.c. at intermediate supports. If pneumatic nail guns are used, be sure to set air pressure to drive nail heads flush or a maximum 1/16" below the panel surface to avoid loss of nail holding and shear strength, and to avoid creating a potential point of water entry.



If your pneumatic tool does not have an adjustment for fastener depth, flush drive attachments are recommended. Guidelines are included on the panel surface to aid in locating supports for nailing.



Quick Note:

If the panel's cut edge is vertical or facing away from the ground, tape that edge immediately after installation with ForceField Seam Tape.

Refer to repair guide on how to treat over-driven fasteners.

Alternate method:

For use on panels up to 1/2" in thickness—use 15-gauge staples spaced 4" along panel edges and 8" at intermediate supports, or 16-gauge staples spaced 3" along panel edges and 6" at intermediate supports driven flush with panel surface.

Taping the Panel Seams

ForceField® Seam Tape Plus and ForceField Seam Tape from Georgia-Pacific must be used to treat the seams between sheathing panels. Substitutions are not covered by the warranty. For best performance results, immediate sealing of joints with tape is required.

Installation:

- Ensure the surface is free from moisture, frost, dust, dirt and other bond inhibiting materials. Center the tape over the panel seam so that a minimum 1" of tape is applied on each side of the panel seam.
- Apply firm pressure on the ForceField Seam Tape or Seam Tape Plus with your hand to ensure that a continuous bond is achieved between the tape and the panel surface and to eliminate wrinkles and air bubbles. As a best practice, use a J-roller to roll over the tape after hand application.

Whenever tape splices occur, a 2" overlap should be used. Sequence tape application such that a shingle lap application is achieved. At T-joints, the tape should overlap by 2".



ForceField® Corner Seal Installation

- Unspool material and cut to a length that is manageable for the installation. Where applicable, overlap the corner seal pieces a minimum of 2" in a shingle lap application. Apply a 6" piece of ForceField Seam Tape over the splice.
- Bend the corner seal appropriately to form an inside or outside corner.
- Align corner seal 1"-2" from the top of the wall.
- Secure corner seal using nails, brad nails or staples at 3' intervals down the length of the piece a maximum 1" from outside edge.
- Seal bottom with another 6" piece of ForceField Seam Tape 1"-2" from bottom.
- Center ForceField Seam Tape over one edge of the corner seal. The tape should overlap onto the panel a minimum of 1".
- Apply firm pressure on the ForceField Seam Tape or Seam Tape Plus with your hand to ensure that a continuous bond is achieved between the tape and the panel surface and to eliminate wrinkles and air bubbles. As a best practice, use a J-roller to roll over the tape after hand application.
- Repeat steps 6–8 for the other edge of the corner seal.
- Apply a 6" piece of ForceField Seam Tape across the top of the corner seal.



QUICK TIP
Cut the corner seal into manageable lengths.

Do not install corner seal across drift joints and expansion joints or where movement is anticipated.



Always be sure to follow applicable local building code requirements and industry best practices. All figures and illustrations contained in these instructions are representative of typical flashing installations, but are not intended to address all possible construction scenarios.

ForceField® Flex Flashing, ForceField AT Flashing or a Georgia-Pacific-approved alternative must be used around openings, penetrations and material transitions. Always be sure to follow local building code requirements. Use a J-roller to ensure that a continuous bond is achieved between the tape and the panel surface and to eliminate wrinkles and air bubbles.

Window Rough Opening Treatment with ForceField® Flex Flashing and ForceField AT Flashing

Before the application of the flashing, ensure that the surface is free from moisture, frost, dust, dirt and other bond inhibiting materials.

Non-Flanged Windows:

- 1. Measure the length of the sill and add 12" to accommodate for turning up both jambs approximately 6".
- 2. Cut appropriate length of ForceField Flex Flashing with a sharp knife.
- 3. Position the tape inside the rough opening over the sill, starting at one side peel and fold half of the release liner back and press into place.
- 4. Remove the remaining liner, starting at the corners, stretch flashing out and onto the face of the panel and up the jamb. Then pull the flashing down onto the face of the panel at the sill. Ensure a minimum 2" of flashing extends onto the panel surface.
- 5. Apply firm pressure using a J-roller to ensure that a continuous bond is achieved between the flashing and the surface and to eliminate wrinkles and air bubbles.

- 6. Cut two 4" pieces of ForceField AT Flashing and position into each head-jamb corner.

Cut two additional pieces of ForceField AT Flashing for the jambs long enough so the tape extends over the ForceField Flex Flashing and past the header approximately 2".

Remove the release liner and position the ForceField AT Flashing over the ForceField Flex Flashing wrapping into the rough opening and onto the panel surface a minimum 2".

- 7. Measure the header length and add 4"-5" to accommodate for overlapping the jamb flashing. Remove release liner and install so that it shingle laps over the jamb flashing. Ensure a minimum 2" of flashing extends onto the panel surface and into the rough opening.
- 8. Roll over all of the flashing tapes with a J-roller, applying firm pressure to ensure that a continuous bond is achieved between the tape and the panel surface and to eliminate wrinkles and air bubbles.

Optional for Flanged Windows:

Install flashing tape or ForceField Seam Tape Plus over the jamb and head flanges in a shingle type application but do not apply tape over the sill flange.

Door Rough Opening Treatment

- 1. Ensure the surface is free from moisture, frost, dust, dirt and other bond inhibiting materials.
- 2. At the sill, install flashing tape or ForceField® Flex Flashing extending up the jamb a minimum 6" and out and over the panel surface a minimum 2" if applicable.
- 3. Cut two pieces of ForceField AT Flashing to the appropriate length and position over the jamb so that it extends past the header approximately 2", overlaps the sill flashing and extends onto the face of the panel surface a minimum 2".
- 4. Cut a piece of ForceField AT Flashing for the header long enough so that it extends over and past the jamb flashing. Position over the jamb flashing tape in a shingle type application. Ensure a minimum 2" of overlap onto the panel surface is achieved.
- 5. Install door per manufacturer's requirements.

Quick Note:

A separate head flashing should be installed over non-flanged doors, refer to project specification for type and configuration of head flashing and follow all applicable building code requirements.

Optional for Flanged Doors:

Install flashing tape over the jamb and head flanges in a shingle type application. Consult door manufacturer for installation requirements and guidelines.

Treatment of Material Transitions and Penetrations

- 1. Ensure the surface is free from moisture, frost, dust, dirt and other bond inhibiting materials.

Provide a minimum 1/2" gap between ForceField® Panel and masonry. Fill gaps between substrates with a backer rod to support the tape.

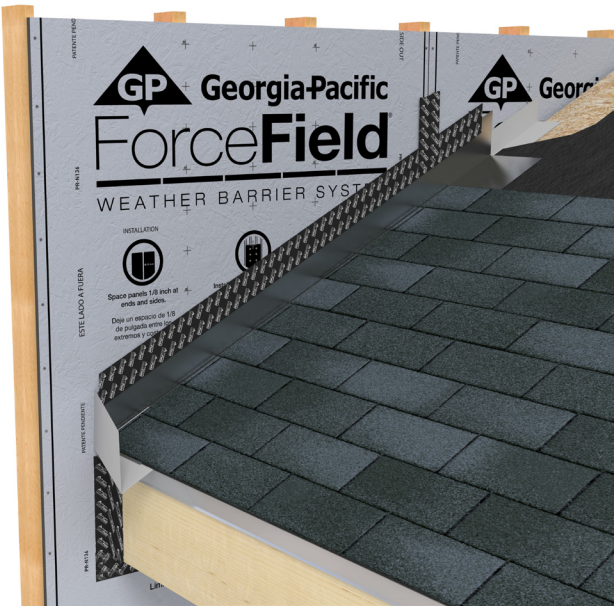
- 2. If no movement is anticipated ForceField Seam Tape Plus may be used. If using ForceField AT Flashing, remove the backing, center over the joint and press firmly into place. Ensure minimum 2" of flashing tape is on each substrate or material surface.
- 3. Overlap a minimum 2" at all end laps of flashing. For vertical transitions, overlap tapes in a shingle type application.
- 4. Apply firm pressure using a J-roller to ensure that a continuous bond is achieved between the flashing or tape and the surface and to eliminate wrinkles and air bubbles.





Roof to Wall Intersection

1. Ensure the panel surfaces are free from moisture, frost, dust, dirt and other bond inhibiting materials.
2. Install ForceField® AT Flashing over the inside corner where the ForceField Panel and roof sheathing meet so that a minimum 2" overlaps onto each surface.
3. Install the roof flashing material (by others) over the ForceField AT Flashing per local building code requirements and project specifications.
4. Overlap the flashing leg that extends up and over the ForceField Panel with ForceField AT Flashing or ForceField Seam Tape Plus. Ensure the flashing fasteners are sealed by the tape or apply an additional piece of tape to seal the fasteners.
5. Install all tapes in a shingle lap application with a minimum 2" overlap at splices.



Flashing Deck Intersection

1. Install flashing (by others) over the ForceField® Weather Barrier System extending above the ledge board approximately 3-4".
2. Install the ledge board following all applicable building code requirements.
3. Fasten a rigid flashing (by others) over the deck ledger board.
4. Install ForceField Seam Tape Plus or ForceField AT Flashing over the flange of the rigid flashing.
5. Install all tapes in a shingle lap application and overlap a minimum 2" at all splices.



Installing Wall Cladding Over ForceField® Panels

Conventional exterior claddings—including, but not limited to, wood, vinyl, metal or cement composition, stone, brick or exterior insulation & finish system (EIFS)—may be applied over ForceField Panels. For stucco, install a vapor permeable water resistive barrier equal to the performance of Grade D paper over ForceField Panels before applying metal lath.

The following recommendations and limitations are important to ensure the proper use and benefits of ForceField® Weather Barrier System. Failure to strictly adhere to such recommendations and limitations may void the limited warranty provided by Georgia-Pacific Building Products for such products. For details, please go to warranty.gpforcefield.com.

- Do not use abutted to general stone or masonry without providing a minimum of a ½" gap.
- Do not install ForceField Seam Tape or ForceField Seam Tape Plus in temperatures less than 20°F or if frost or ice is present on the panel surface.
- In wall covering systems requiring multiple layers of water resistive barriers, ForceField Weather Barrier System is intended to replace only the first layer.
- ForceField Seam Tape is not recognized as a replacement for rigid, metal or other through wall flashings prescribed by others. ForceField Seam Tape can be used to transition from the ForceField Weather Barrier System to the rigid flashing.
- ForceField Panels and accessories are resistant to normal weather conditions. They are not intended for use as a cladding system, long-term outdoor exposure, immersion in water or cascading water from an unfinished roof or floor. Water should always be directed away from the ForceField Weather Barrier System.
- Avoid conditions that will create moisture in the air and condensation within the exterior walls. This precaution is especially important during periods when the exterior and interior temperature differentials can create a condensation point within the exterior wall. The use of forced air heaters creates volumes of water which, when not properly vented, can condense on building materials. The use of heaters and any resulting damage is not the responsibility of Georgia-Pacific Building Products. Consult heater manufacturer for proper use and ventilation.



- Georgia-Pacific Building Products does not warrant and is not responsible or liable for the performance of any cladding or cladding system that is attached or adhered to the ForceField Weather Barrier System. The compatibility of any cladding system is the responsibility of the cladding manufacturer or design authority.
- Do not attach cement board panels directly to ForceField Panels.
- ForceField Weather Barrier System is not intended for interior applications or as a substrate for adhered exterior tile, stone, EIFS or brick.
- Panel fasteners shall be driven into framing and shall be flush with the face, not countersunk.
- Exterior wall design details including, but not limited to, cladding attachments, control joints, material transition details, window and door integration, per the project specification must be properly installed.
- Joints, openings, transitions and penetrations must be properly sealed, taped or flashed. Failure to do so may void the warranty.
- Wall sheathing panels should not be glued to framing members.
- Do not install ForceField Panels on a horizontal surface; ensure panels are installed with sufficient positive slope to prevent ponding and pooling.
- Do not install ForceField Weather Barrier System below grade.

*These renderings are for illustration purposes only and not intended for design purposes.

GP Building Products
133 Peachtree Street, N.E. | Atlanta, Georgia 30303

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

PRECAUTIONS – For product fire, safety and use information, go to buildgp.com/safetyinfo or call 800-225-6119.

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