

# INSTALLATION OVERVIEW

DensElement® Barrier System



# SYSTEM SOLUTION

The DensElement® Barrier System unites science with technology. Comprised only with approved components, it has undergone rigorous performance testing for conformance with the current water-resistive barrier and air barrier requirements of the International Building Code (IBC) and the International Energy Conservation Code (IECC). Today, those components include:

- DensElement® Sheathing from GP Gypsum
- DensDefy™ Liquid Flashing from GP Gypsum

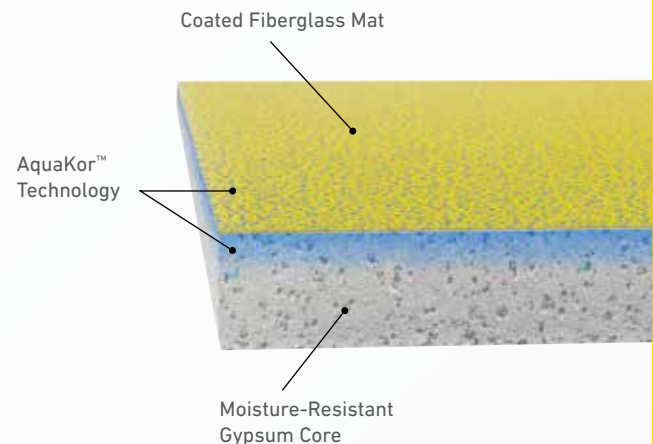


## REVOLUTIONIZING THE WATER-RESISTIVE AND AIR BARRIER SYSTEM ////////////////

Keep walls dry. It sounds simple, but time and time again water infiltration is the main culprit for failure within a building envelope. History has proven that typical construction will allow some moisture to penetrate either the structural wall or rough openings. It's not a question of if moisture will get into a building; it's a question of when.

So how can you ensure that when moisture gets into your building that it can get out too? The DensElement® Barrier System, with AquaKor™ Technology is the answer. Until now, industry-accepted water-resistive and air barrier (WRB-AB) products have not delivered fully:

- Fabric wraps may rip and tear in even mild breezes, let alone strong storms. Even where they stay on, staple holes may provide air and water access to the structural walls.
- Conventional fluid-applied WRB-AB membrane systems can be time and labor intensive; requiring installers to coat the entire sheathing surface with potential coating thickness variations.
- Low permeable peel-and-stick membranes can trap and hold water if moisture penetrates to the sheathing through the seams in the membrane, accelerating the very problem of moisture-related decay they were designed to prevent.



## SCIENTIFICALLY ENHANCED ////////////////

The key to the unique benefits offered by the DensElement® Barrier System can be found in its proprietary advancement, AquaKor™ Technology, which integrates the gypsum core and the fiberglass mat to form a hydrophobic, monolithic surface that blocks bulk water but allows vapor to pass through. This eliminates the need for a separate WRB-AB, which reduces the potential for installer error associated with field-applied WRB-AB systems. The end result is a faster, easier installation process that provides the protection of a continuous WRB-AB.

Every seam or penetration causes potential for moisture intrusion. So, for maximum protection, the system is complete with tested and approved DensDefy™ Liquid Flashing, which fills and seals joints, fasteners, openings, penetrations and transitions.



# INSTALLATION INSTRUCTIONS

## Sealing Joints, Vertical Corners, Fasteners, Openings, Penetrations and Transitions for Water-Resistive Barrier and Air Barrier Compliance

### JOINTS



1. Apply DensDefy™ Liquid Flashing over the DensElement® Sheathing joint in a zig-zag or ribbon pattern.
2. With a straight edge tool, spread evenly over the sheathing joint.
3. Apply at a rate to achieve a minimum thickness of 16 wet mils over the entire joint area, leaving no exposed sheathing. Cover a minimum of 1-in. on both sides of the joint.

### VERTICAL CORNERS



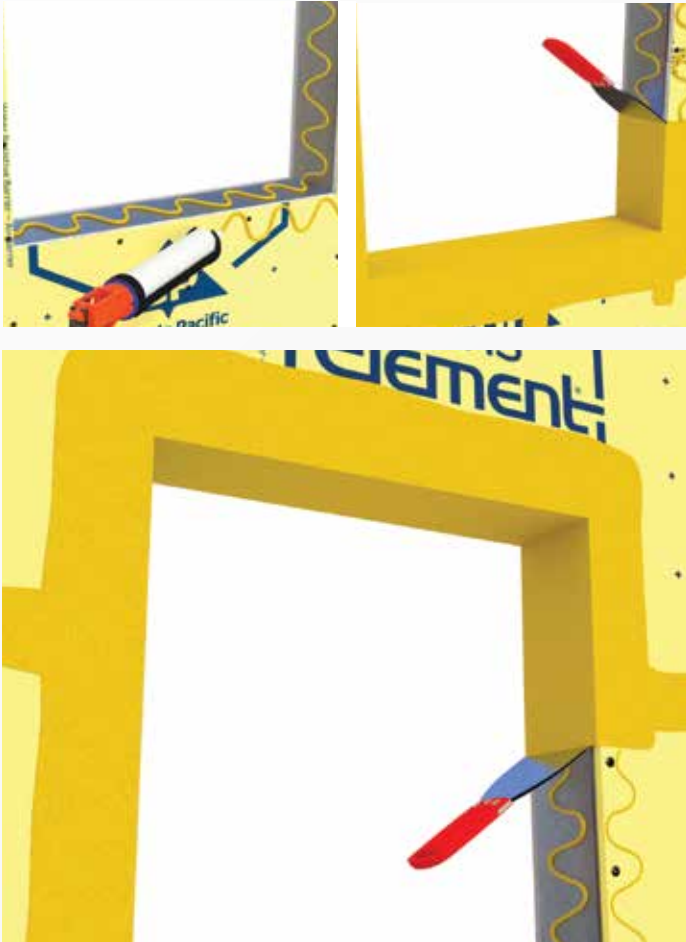
1. Apply DensDefy™ Liquid Flashing over the inside and/or outside corner in a zig-zag or ribbon pattern.
2. With a straight edge tool, spread evenly over the sheathing corner.
3. Apply at a rate to achieve a minimum thickness of 16 wet mils over the corner area. Cover a minimum of 2-in. on both sides of the corner.

### FASTENERS



1. The fasteners should be spotted with DensDefy™ Liquid Flashing and wiped down with a straight edge tool leaving a minimum thickness of 16 wet mils over the entire fastener.

## ROUGH OPENINGS



1. Rasp any jagged or uneven DensElement® Sheathing edges and clean framing free of debris and dust or other bond inhibiting materials.

Note: For treated lumber, clean with an Isopropyl alcohol wipe and allow to flash off prior to application of DensDefy™ Liquid Flashing.

2. Apply a bead of DensDefy™ Liquid Flashing into all inside corners of the opening.
3. Apply DensDefy™ Liquid Flashing in the opening sill, jamb and header in a zig-zag or ribbon pattern.
4. Apply DensDefy™ Liquid Flashing over the DensElement® Sheathing adjacent to the opening sill, jamb and header in a zig-zag or ribbon pattern.
5. Use a straight edge tool to spread the DensDefy™ Liquid Flashing to a pinhole and void free application achieving a minimum 16 wet mils.
6. Spread the DensDefy™ Liquid Flashing a minimum of 2" into the rough opening and a minimum 1" past the interior air seal of the window unit. Refer to the project details and specifications to determine window placement and minimum requirement for rough opening treatment.
7. Ensure a minimum 2" of DensDefy™ Liquid Flashing is applied onto the sheathing surface adjacent to the opening.

## PIPE PENETRATIONS

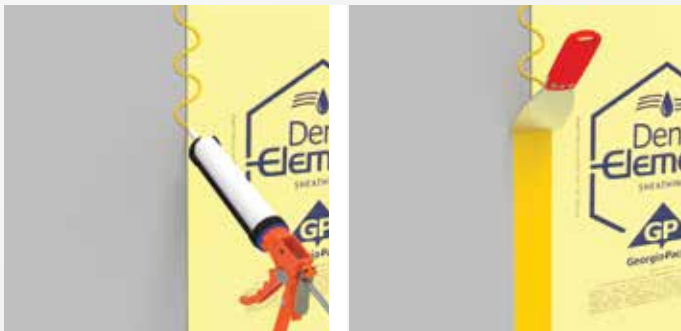


1. Mechanically secure penetrations.
2. If the gap between materials is over 1/4-in., install backer rod between penetration and DensElement® Sheathing to form a back dam regardless of size of penetration or opening.\*

\* Only acceptable for non fire rated assemblies.

3. Apply a thick bead of DensDefy™ Liquid Flashing around the penetration.
4. Use a straight edge tool to feather and completely seal the joint around the penetration.

MATERIAL TRANSITIONS



- 1. If the gap between materials is over 1/4-in., fill the gap between the DensElement® Sheathing and adjacent materials with a backer rod.
- 2. If necessary, prime the adjacent material with primer per the material manufacturer's recommendations.
- 3. Apply DensDefy™ Liquid Flashing over the DensElement® Sheathing and adjacent material in a zig-zag or ribbon pattern.
- 4. Using straight edge tool, spread DensDefy™ Liquid Flashing over material transition joint.
- 5. Apply at a rate to achieve a minimum thickness of 16 wet mils. Ensure the flashing is applied a minimum of 2-in. on each substrate material surface.

DensElement® Barrier System	
DensDefy™ Liquid Flashing Application Chart*	
Container: 20 oz. "Sausage"	
2 inch joint width coverage	
Minimum Mil Thickness	Coverage (linear feet)
16	85
22	62
28	48
2x4 framed opening coverage	
Minimum Mil Thickness	Coverage (linear feet)
16	25-30

\* Coverage shown is an estimate only. Actual coverage will vary based on experience level of applicator and other factors.

\* Coverage assumes that joints and corners are butted tightly together and gaps and voids are prefilled with backer-rod.





GP Gypsum LLC  
133 Peachtree Street, N.E. | Atlanta, Georgia 30303

**DensElement.com**

**GP Tech Hotline:** 800-225-6119

**CAUTION:** For fire, safety and use information  
go to [BuildGP.com/Safetyinfo](http://BuildGP.com/Safetyinfo).

**WARRANTY:** For current limited warranty for this  
product, visit [DensElement.com/Resources](http://DensElement.com/Resources)