

INSTALLATION GUIDE



Introduction

New DensDefy™ Liquid Barrier from Georgia-Pacific works across multiple substrates, helping to protect against water intrusion and mitigating the risk of unwanted air movement.

This highly durable, fluid-applied, water-resistive barrier and air barrier can be applied to damp surfaces, cures quickly and is vapor permeable. DensDefy Liquid Barrier may be applied in temperatures as low as 25°F and cures in temperatures as low as 32°F.

The newly expanded family of DensDefy™ Products is compatible with DensElement® Barrier System, available with product support and backed by a single warranty from Georgia-Pacific.

Preparation

- Before applying DensDefy Liquid Barrier System, ensure the surface is clean and free of frost, dirt, debris, contaminants and other bond-inhibiting materials.
- Protect people, vehicles, property, plants and all other surfaces not intended to receive DensDefy Liquid Barrier.
- Ensure substrates are installed per project specifications and local building code requirements.
- Clean pressure-treated wood with an isopropyl alcohol wipe and allow to flash-off before applying DensDefy Products.
- Concrete must be cured for a minimum of 7 days and masonry mortar joints must be cured for a minimum of 3 days. Masonry joints should be filled and struck flush.
- Damaged sheathing should be removed and replaced.
- All surfaces should have a positive pitch to prevent ponding or pooling of water.
- Cap and seal roofing systems or protect top of walls from water intrusion before and after the air barrier system is installed. Water intrusion may interfere with bonding of air barrier waterproofing materials and/or detrimentally impact the performance of such materials.

Equipment

- DensDefy Liquid Barrier: paint roller frame, pole, 1/4" or 3/8" nap lint-free roller cover, paint screen, low-speed drill and mixing paddle
- DensDefy® Liquid Flashing: professional caulking gun and spreading tool, knife
- DensDefy® Transition Membrane: tape measure, knife, and J-roller

Safety

Wear appropriate PPE for application. Refer to SDS for more information: [msds.gp.com](https://www.msds.gp.com).

Storage & Handling

Store in a cool, dry place. Keep container tightly closed when not dispensing. Do not open container until preparation work has been completed. Do not alter or mix with other chemicals. When stored at or below 80°F (27°C) out of direct sunlight, DensDefy Liquid Barrier has a shelf life of 12 months from the date of manufacture. This shelf life assumes upright storage of factory-sealed containers. Do not double stack pallets. Dispose of unused product and container in accordance with local, state and federal regulations.

Product and spray equipment should be stored at 70-75°F (21-24°C) prior to use to ensure proper spraying. Cooler product will be more difficult to spray.

Code Compliance

DensDefy Liquid Barrier System conforms to the requirements as a water-resistive barrier and air-barrier with the codes listed below as documented in ICC-ES ESR-4708 by meeting established water-resistive barrier and air-barrier acceptance criteria.

- 2021, 2018, 2015 and 2009 International Building Code® (IBC)
- 2021, 2018, 2015, 2012 and 2009 International Residential Code® (IRC)
- 2021, 2018, 2015 and 2009 International Energy Conservation Code® (IECC)
- 2019 California Green Building Standards Code (CALGreen), Title 24, Part 11
- 2018, 2015 and 2012 International Green Construction Code® (IgCC)
- 2017, 2014 and 2011 ANSI/ASHRAE/USGBC/IES Standard 189.1-Standard for the Design of High-Performance Green Buildings, Except Low-Rise Residential Buildings
- 2020, 2015, 2012 and 2008 ICC 700 National Green Building Standard™ (ICC 700-2020, ICC 700-2015, ICC 700-2012 and ICC 700-2008)
- 2021 City of Los Angeles Building Code (LABC) and 2021 City of Los Angeles Residential Building Code (LARC)
- DensDefy Liquid Barrier System installed as a water-resistive barrier and an air barrier material, is recognized for use on Types I, II, III, IV and V construction. When used on exterior walls of buildings greater than 40 feet above grade in Types I, II, III or IV construction under the 2021, 2018 and 2015 IBC, installation must comply with Exception 1 of 2021 and 2018 IBC Section 1402.5 (2015 IBC Section 1403.5).

DensDefy Liquid Barrier System has been evaluated as an air barrier by the Air Barrier Association of America (ABAA)

Fire Resistance/NFPA 285

DensDefy Liquid Barrier System is NFPA 285 compliant with multiple assemblies that hold an ICC-ES Evaluation Report, including Brick, Stucco, Metal Panel and other claddings.

Application of DensDefy® Liquid Flashing

Read "Preparation" section of this document and the SDS located at [buildgp.com/denselement/resources/literature/](https://www.buildgp.com/denselement/resources/literature/) before use.

Dilution & Mixing

Apply as packaged. Do not dilute, alter or use for applications other than specified. No mixing is required.

Typical Coverage Rates

DensDefy Liquid Flashing is sold in 20-oz. sausages. Coverage varies based on surface texture, irregularities, application width and thickness. A 2-inch-wide, 28-mil-thick application will cover 48 linear feet.



Application of DensDefy™ Liquid Barrier

Before use, read Preparation, Hazard Statements and Precautionary Statements.

Typical Coverage Rates

Coverage rates will vary depending on surface porosity, moisture uptake and other factors. Actual rates must be determined through mock-up applications. Some gypsum sheathing products, OSB and CMU may require additional material and multiple passes to achieve the desired mil thickness and an application free of pinholes and voids.

- Exterior Gypsum Panel: 450–550 sq. ft. per 5-gallon pail when applied at 14–18 wet mils
- OSB/Plywood: 250–350 sq. ft. per 5-gallon pail when applied at 14–18 wet mils
- CMU: 300–400 sq. ft. per 5-gallon pail when applied at 14–18 wet mils total in multiple passes





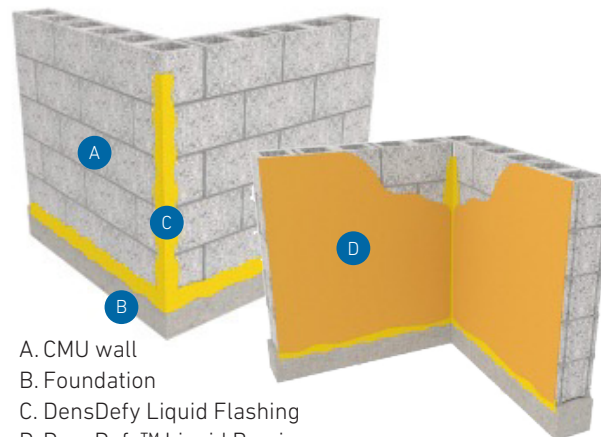
Complete Detail Work With DensDefy™ Products Over All Substrates

Seal vertical corners, openings, penetrations and material transitions on walls with DensDefy® Liquid Flashing as shown in the DensDefy Liquid Flashing installation guide.



Vertical Corners

1. Apply DensDefy Liquid Flashing over the inside/outside corners in a zig-zag or ribbon pattern.
2. With a straight-edge tool, spread evenly over the wall 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.



- A. CMU wall
- B. Foundation
- C. DensDefy Liquid Flashing
- D. DensDefy™ Liquid Barrier

Note: For framed wall construction, apply DensDefy Liquid Flashing to sheathing panel seams.

Mix DensDefy™ Liquid Barrier

Mix using a low-speed drill and mixing paddle from top to bottom and side to side for a minimum of 3 minutes before use. Avoid mixing air into the product. Do not dilute or thin.

When remixing previously opened pails, remove any cured material from the pail prior to mixing.



Coat the Field of the Wall with DensDefy Liquid Barrier

Note: DensDefy® Liquid Flashing may be applied over or under the DensDefy Liquid Barrier. Overlap DensDefy materials approximately 1" to maintain air- and water-resistant barrier continuity.

If DensDefy® Transition Membrane is used, install it first, then treat the edges with DensDefy Liquid Flashing, and finally apply the DensDefy Liquid Barrier approximately 1" over the DensDefy Liquid Flashing.

Let DensDefy Liquid Flashing skin over before applying DensDefy Liquid Barrier.



Roller Application

Using a lint-free 1/4" or 3/8" nap roller, apply DensDefy Liquid Barrier in vertical strokes with a slight diagonal slant. Roll back over any edge lines or built up areas to prevent sag. Additional material and passes may be needed over porous substrates to achieve a pinhole-void-free application.



Spray Application

Recommended Spray Equipment	Graco	Titan
Sprayer (>4000 psi, >3 gpm)	833 Direct Immersion or equivalent	PowerTwin 12000di Direct Immersion
Hose (up to 200 ft)	1/2" ID 4000 psi	1/2" ID 4000 psi
Whip (6 to 10 ft)	3/8" whip and gun swivel	3/8" whip and gun swivel
Gun (listed or equivalent)	HD Blue 241706	RX-Apex
Tip	523 reversible tip	HD reversible tip

Recommended Accessories

- Spray tip extension – improves delivery and extends reach
- Spray tip swivel for extension

Note: Other combinations of sprayers, guns and tip sizes can be qualified by the contractor to achieve the desired application properties.

When selecting airless spray equipment, it is important to ensure the sprayer is direct immersion and can maintain at least 3500–4000 psi at the spray tip. Remove all filters prior to spraying.

Proper Power Sprayer Equipment Maintenance

Review the recommended daily maintenance instructions provided by the pump manufacturer.

Before Use: Ensure the sprayer has been flushed with an approved solvent such as mineral spirits. Do not rinse with water.

During Use: Precautions should be taken to prevent open pail of material from skinning during application. Plastic sheeting may be placed on the material to prevent air exposure.

After Use: Ensure all tips, hoses and the sprayer have been completely flushed with mineral spirits or other approved solvent immediately after use. Never run water through the pump when using DensDefy™ Liquid Barrier, as this is a moisture-cure product and will react with any water in the pump and lines. Do not allow DensDefy Liquid Barrier to sit idle in the sprayer for more than 15 minutes. Thoroughly flush equipment with approved solvent after each use.

Product and sprayer should be stored at 70-75°F (21-24°C) prior to use to ensure proper spraying. Cooler product will be more difficult to spray.

General Application Notes

- Apply material so that a minimum 14 wet mils are achieved with no pinholes or voids. Inspect surface after initial application and touch up as needed; pinholes may not appear immediately.

Note: When spraying over porous substrates such as CMU, spraying in multiple light coats may help minimize pinholes. Alternatively, spraying and then back rolling may also help minimize pinholes and voids.

- Seal masonry ties and penetrations as work progresses.
- Cover pail immediately after use and during any work stoppages to prevent product curing in the container.

Repair

- Inspect membrane for damage, voids or pinholes prior to covering. Repair any deep gouges, punctures or damaged areas with DensDefy® Liquid Flashing. Overlap repairs, penetration treatments, transitions, rigid flashing and other air barrier components to ensure positive drainage and continuity of the air- and water-resistive barrier.

Cleanup

Clean tools and equipment with mineral spirits or similar solvent immediately after use.

Surface and Ambient Air Temps

Between 32°F (0°C) and 110°F (43°C) are required for proper curing and drying of material.

Hot Weather Conditions: When air or surface temps exceed 95°F (35°C), apply product to the shady side of structure before daytime air/surface temps reach their peak. Hot surfaces may be cooled with a mist of fresh water. Keep containers closed and out of direct sunlight when not in use. Do not apply when substrate temp exceeds 110°F (43°C).

Cold Weather Conditions: Product may be applied to frost-free substrates at temperatures as low as 25°F (-3.9°C). Product will not begin to cure until temps reach 32°F (0°C) and remain above freezing. Storing product in a heated environment prior to use and misting applied material with warm, fresh water helps in these conditions.

Low Humidity Conditions: The process of curing may take longer when lower humidity levels occur. A light misting of fresh water over the treated surface will accelerate curing if necessary.

Note: DensDefy Liquid Barrier and DensDefy Liquid Flashing may be applied to damp surfaces and tolerate rain immediately after application. Do NOT apply to surfaces with standing water or frost.



Recommendations and Limitations for Use

The following recommendations and limitations are important to ensure the proper use and benefits of DensDefy™ Liquid 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 buildgp.com/warranties.

- DensDefy Liquid Barrier is not for use as a liquid flashing membrane. Use DensDefy® Liquid Flashing.
- Not for use in place of appropriate through-wall flashing material.
- Do not use DensDefy Liquid Barrier System below grade or in locations that may be continuously immersed in water.
- DensDefy Liquid Barrier System is not intended for permanent exposure. Cover within 12 months after installation.
- DensDefy Liquid Barrier System is resistant to normal weather conditions. It is not intended for use as a cladding system, long-term outdoor exposure, immersion in water or use with cascading water from an unfinished roof or floor. Water should always be directed away from DensDefy Liquid Barrier System.
- Do not apply to contaminated or frost-covered surfaces. Treated lumber must be dry and solvent wiped with isopropyl alcohol prior to application of DensDefy Liquid Barrier System.
- Avoid conditions that will create moisture in the air and condensation within the exterior walls. This 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.

- For cladding systems that require multiple layers of water-resistive barriers, DensDefy Liquid Barrier System is intended to replace only the first layer over the wall substrate.
- Avoid the use of solvent-based primers, adhesives or accessory products with DensDefy Liquid Barrier System.
- Exterior wall design details including, but not limited to, cladding attachments, control joints, material transition details, drainage mechanisms, flashing, sealants, and window and door integration must be properly installed per the project specifications.
- Roofing systems must be capped and sealed, and top of walls protected from water intrusion both before and after DensDefy Liquid Barrier installation. Water intrusion may interfere with adhesion and/or detrimentally impact the performance of such materials.
- 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 DensDefy Liquid Barrier System. The compatibility of any cladding system is the responsibility of the cladding manufacturer or design authority.
- DensDefy Liquid Barrier System is not for use with insulated concrete forms.

Limited Warranty

Georgia-Pacific Building Products provides a limited warranty for DensDefy Liquid Barrier System as part of the original building envelope of a residential or commercial property. For a full copy of the DensDefy Liquid Barrier Limited Warranty, go to buildgp.com/warranties. GP makes no other warranties, express or implied, and specifically disclaims any warranties of merchantability or fitness for a particular purpose.

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Georgia-Pacific Building Products

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SALES INFORMATION AND ORDER PLACEMENT

U.S.A. Pacific Southwest: **1-800-824-7503**
Midwest: **1-800-876-4746**
Central: **1-800-231-6060 x7709**
North: **1-800-947-4497**
Pacific Northwest **1-800-444-0092**
South **1-800-327-2344**

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

TECHNICAL HOTLINE

U.S.A. and Canada: **800-225-6119**

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WARRANTIES AND TERMS OF SALE – For current warranty information, please go to buildgp.com/warranties and select the applicable product. All sales by Georgia-Pacific are subject to our Terms of Sale available at buildgp.com/tc.

CAUTION – For product fire, safety and use information, go to buildgp.com/safetyinfo or call 1-800-225-6119.

HANDLING AND USE – Refer to SDS for instructions on safe handling and use of the product here: msds.gp.com.

