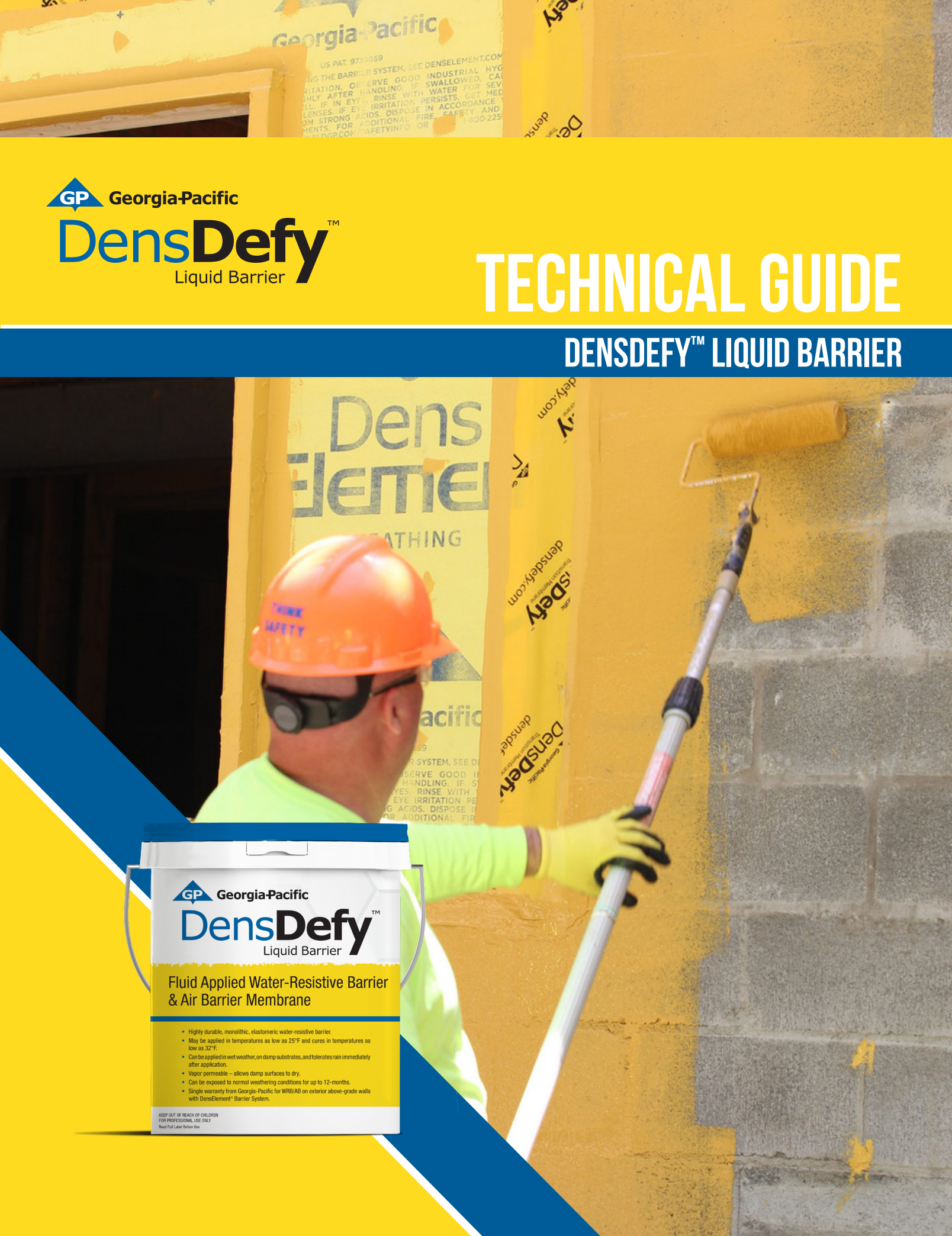
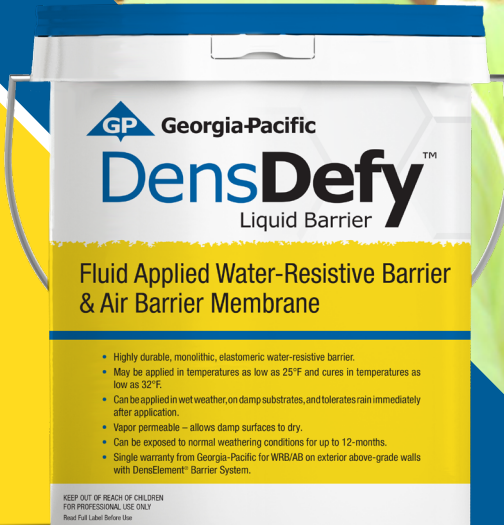




TECHNICAL GUIDE

DENSDEFYTM LIQUID BARRIER



Product Overview

DensDefy™ Liquid Barrier is a fluid-applied, single-component silyl-terminated polymer (STP) air- and water-resistive barrier applied by roller or with spray equipment over many common substrates.

The robust, elastomeric membrane formed by DensDefy Liquid Barrier adheres to most common construction surfaces such as CMU, concrete, glass mat gypsum sheathing, OSB and plywood, galvanized steel and wood framing, and is compatible with a wide range of sealants and waterproofing or air barrier components.

Summary of Benefits

DensDefy Liquid Barrier creates a robust barrier that helps keep bulk water out, but remains permeable, which allows water vapor to escape and promote drying. DensDefy Liquid Barrier helps prevent air infiltration for a more energy-efficient structure, and can be applied to dry or damp substrates to help eliminate weather delays and accelerate “dry-in” of new buildings. It also may be exposed to UV and normal weather conditions for up to 12 months after installation.

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.

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DensDefy™ Liquid Barrier System Components

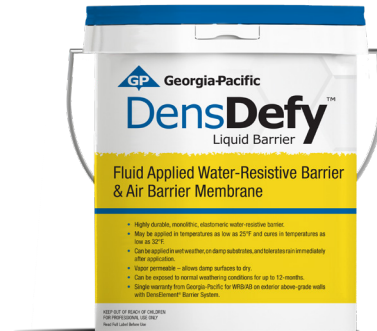
DensDefy Liquid Barrier

DensDefy Liquid Barrier is a fluid-applied air- and water-resistive barrier made with STP Technology. This single-component barrier is roller- or spray-applied to produce a seamless, durable membrane on exterior gypsum sheathing, wood sheathing, CMU and concrete walls. DensDefy Liquid Barrier can be applied to dry or damp substrates to help eliminate weather delays and accelerate dry-in of new buildings.

Packaging: Available in 5-gallon pails for roller or spray application.

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 a pinhole-void-free application.

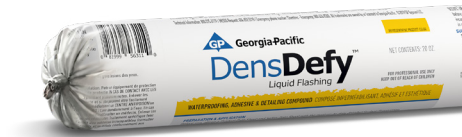
- Exterior Gypsum Panel: 450–550 sq. ft. per 5-gallon pail when applied at 14–18 wet mils
- OSB/Plywood: 250–350 sq. ft. per 5-gallon pail when applied at 14–18 wet mils
- CMU: 300–400 sq. ft. per 5-gallon pail when applied at 14–18 wet mils total in multiple passes



DensDefy® Liquid Flashing and Transition Membrane

DensDefy Liquid Flashing is a waterproofing and detailing compound made with STP Technology that seals rough openings and penetrations in new or existing wall assemblies. DensDefy Liquid Flashing creates an elastomeric flashing membrane that is highly durable.

Packaging: Available in a 20-oz. sausage for professional gun application



DensDefy Transition Membrane is a 25-mil composite impermeable membrane that is comprised of 16 mils of butyl adhesive and 9 mils of HDPP facer. It is primarily used as a transitioning accessory between dissimilar materials.

Packaging: 75' rolls available in 3 widths

Length: 75' (22 m)

Width: 6" (15 cm) 8 rolls/box
9" (22 cm) 4 rolls/box
12" (30 cm) 4 rolls/box



Georgia-Pacific Building Products Sustainability

Georgia-Pacific Building Products' definition of sustainability is meeting the needs of society today without jeopardizing our ability to do so in the future. We are committed to using resources efficiently to provide innovative products and solutions that meet the needs of customers and society while operating in a manner that is environmentally and socially responsible, as well as economically sound.

Physical Properties: DensDefy™ Liquid Barrier

Physical Properties	
Form	Viscous liquid, yellow color, mild odor
Specific Gravity	1.26–1.33
Weight	10.5–11.5 (lbs/gallon)
Total Solids	Approx. 99%
VOC Content	<30 (g/L)
Shelf Life	1 year in properly stored, unopened original packaging
Surface Skin/Non-Wet Transfer Time	2–4 (hrs)

Cured Properties	
Hardness, Shore A	19–23
Tensile Strength	>90 (psi)
Elongation at Break	>400% (ASTM D 412)
Transfer Free Time	< 1 hour (at room temperature and 50% relative humidity)
Water Vapor Transmission	10 Perms (ASTM E96 Method A) 14 Perms (ASTM E96 Method B)
Surface Burning Characteristics	Class A (ASTM E84) Flame Spread = 25 Smoke Developed = 10

Installation Instructions

For full installation instructions and details, refer to the DensDefy™ Liquid Barrier System Installation Guide.

Dilution and mixing:

Mix well before use. Do not dilute, alter or use for applications other than specified.

Preparation:

Protect people, vehicles, property, plants and all other surfaces not intended to receive DensDefy Liquid Barrier. Apply to frost-free surfaces free of contaminants, such as chemical residues, surface coatings or other bond-inhibiting materials that may adversely affect adhesion.

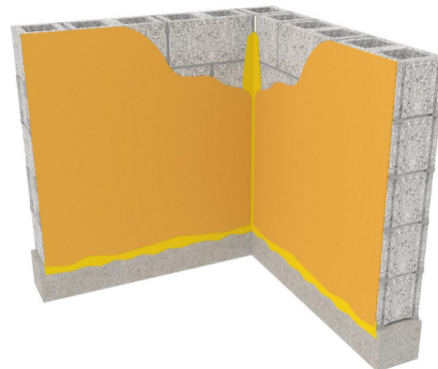
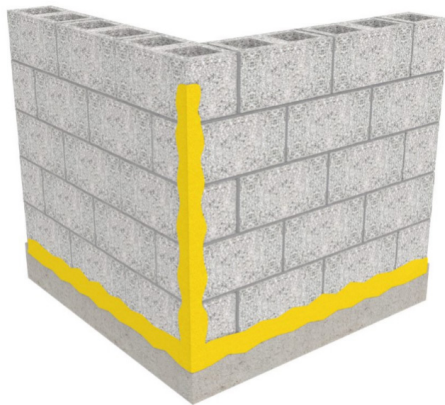
Note: Clean pressure-treated wood with an isopropyl alcohol wipe and allow to flash off before application.

Concrete must be in place 7 days and free of any curing compounds or form release agents before application. Mortar joints in CMU construction must be filled and struck flush, and should have a minimum 3-day cure. Scrape or grind mortar or concrete drippings flush and remove efflorescence or laitance. Fill voids and holes with suitable non-shrink grout or mortar.

Install exterior gypsum sheathing in accordance with GA-253 and the manufacturer's installation instructions. Remove and replace damaged sheathing.

Wall Treatment:

- For exterior gypsum or wood sheathing, treat in-plane sheathing seams, penetrations, corners and changes in plane with DensDefy® Liquid Flashing.
- For CMU or concrete walls, pretreat inside and outside corners with DensDefy Liquid Flashing.



Rough Openings and Material Transitions:

Rough openings and material transitions can be treated with DensDefy® Liquid Flashing or DensDefy® Transition Membrane.

When using DensDefy Transition Membrane, counter flash membrane seams and perimeter with DensDefy Liquid Flashing prior to the application of DensDefy™ Liquid Barrier.



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

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

Allow DensDefy Liquid Flashing to skin over before applying DensDefy Liquid Barrier. Roller or spray apply DensDefy Liquid Barrier to exterior wall, covering with a minimum 14 wet mils without pinholes or voids. Porous substrates such as OSB and CMU may require additional material or multiple coats. Inspect surface after initial application and touch up as needed; pinholes may not appear immediately.

Curing

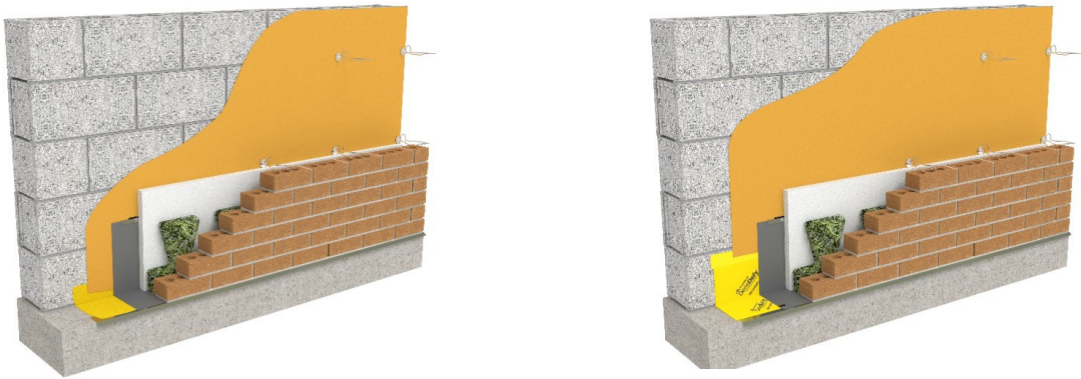
- Cold Weather Conditions/Precautions:** Only apply at temperatures above 25°F (-4°C) and rising. Colder temperatures may adversely affect coverage and curing times. Substrate and temperature conditions between 32°F (0°C) and 110°F (43°C) are required for proper curing and drying of material to take place. Keeping material stored in a heated environment prior to use and misting applied material with warm, fresh water will help in these conditions.
- Hot Weather Conditions/Precautions:** When air or surface temperatures exceed 95°F (35°C), apply product to the shady side of structure before daytime air and surface temperatures 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 temperature exceeds 110°F (43°C).
- Low Humidity Conditions/Precautions:** 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.

Wall Applications

DensDefy™ Liquid Barrier with Brick

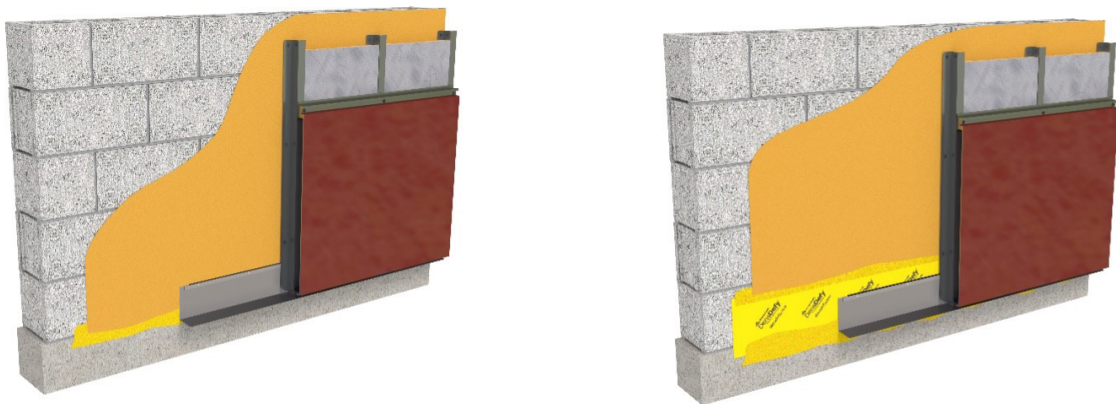
Masonry can be applied over DensDefy Liquid Barrier just as it would over any other type of water-resistive barrier. Brick ties should be installed in accordance with the manufacturer's written installation instructions and local building code requirements. Apply continuous insulation as required by building code or design authority. Brick veneer should be installed with at least a 2" air gap between the brick veneer and substrate.

Important: Applications are presented for illustration only and may not be appropriate for all projects, conditions or components. Please consult an appropriate professional for design and detailing of the project. Georgia-Pacific Building Products does not provide design services.



DensDefy Liquid Barrier with Rainscreen Panels

DensDefy Liquid Barrier can be used in applications behind a variety of rainscreen assemblies. Rainscreen subframes should be installed in accordance with the manufacturer's installation recommendations and code requirements.



Storage and 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, DensDefy® Liquid Flashing and DensDefy® Transition Membrane have a shelf life of 12 months from the manufacture date. 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.

Recommendations and Limitations for Use

The following recommendations and limitations are important to ensure the proper use and benefits of DensDefy Liquid Barrier. 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 buildgpc.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 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 Products.
- 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, per the project specification, must be properly installed.
- 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 buildgpc.com/warranties. Georgia-Pacific makes no other warranties, express or implied, and specifically disclaims any warranties of merchantability or fitness for a particular purpose.



Georgia-Pacific Building Products

U.S.A. GP Gypsum LLC

CANADA Georgia-Pacific Canada LP

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.

PRECAUTIONS – 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.

