

Mass Timber Moisture Protection

vapor permeable membranes for comprehensive mass timber moisture protection during and after construction. Roof Deck/Floor Deck Protection: SlopeShield Plus Self-Adhered, Framework Protection: WallShield IT, Wall WRB/Air Barrier: PanelShield SA

Product Description

SlopeShield Plus Self-Adhered roofing underlayment offers permanent mass timber roof deck/floor deck protection by allowing vapor to pass through (breathable) but not air or liquid water.

WallShield IT Integrated Tape water resistive barrier (WRB) membrane offers mass timber post, column, and beam protection by allowing vapor and air to pass through but not liquid water.

PanelShield SA is a permeable polyester air barrier (AB) and water resistive barrier (WRB) sheet membrane offers permanent protection for exterior walls by allowing vapor to escape through but not air or liquid water.

Basic Use

SlopeShield Plus SA is installed on the roof deck/floor deck as the structure is erected and taped using VaproTape on the seams. The underlayment can be installed on a low slope (1/4":12 to 2:12) assembly or a steep slope (2:12 or greater) assembly.

WallShield IT is wrapped around post/columns and beams, and uses VaproTape at the seams.

PanelShield SA is designed for exterior walls with rainscreen cladding materials. VaproShield offers additional WRB air barrier membranes for walls including open joint cladding, see individual product data sheets.

Materials

SlopeShield Plus SA: spun-bond polyester

WallShield IT: multiple layers of spun-bonded polypropylene

PanelShield SA: spun-bond polyester

Benefits

All **SlopeShield Plus SA, WallShield IT, and PanelShield SA** offer the following benefits to protect mass timber in the factory and through construction and occupancy:

- Resists bulk water intrusion
- **Dries mass timber** through moisture vapor diffusion
- May be **installed on damp surfaces**
- **Tough** and **durable** to tools, foot traffic, and machinery
- **Six to 12 months** UV and climate exposure
- Self-adhered membranes **do not require primer**
- **Simple installation** – requires only basic tools
- **Zero VOC exposure**

SlopeShield Plus SA and PanelShield SA benefits:

- **Monolithic sheet goods** covering entire mass timber roof deck/floor deck versus simple taped splines which offer little to protection or drying capacity, resulting in water damage and mold
- **Consistent millage thickness** – a factory-made rolled good ensures consistent properties and performance
- **Airtight barrier** – stops air infiltration as per the ASTM E2178 air permeance material test and meets energy code
- **Tested to industry standards** for air barrier, water resistive barriers and roofing underlayment

WallShield IT post/column and beam benefits:

- **Reduces structural compromise** from wetting
- **Cutting-edge drying capacity**, promotes rapid drying
- **Easily removed**, reused for other post/columns and beams, or recycled

Compatible Substrates

- All mass timber types:
- Cross-laminated timber (CLT)
- Nail-laminated timber (NLT)
- Dowel-laminated timber (DLT)
- Vertically laminated veneer lumber (LVL)
- Glue-laminated timber (GLT)
- Laminated strand lumber (LSL)
- Timber-concrete composites (TCC)
- Parallel strand lumber (PSL)
- Mass plywood panel (MPP)

For additional substrates view individual product data sheets or contact VaproShield Technical.

Environmental

Environmental Product Declaration (EPD) third-party verified. ISO 21930 and ISO 14025 North American compliant.

Wall and Roofing System Compatibility

View individual product data sheets.

Contact VaproShield Technical if you have any additional substrate or compatibility questions.

Applications

Mass timber post/columns, roof decks/floor decks, and walls. View individual product data sheets for additional application information.

Availability

VaproShield products are available throughout North America, Central and South America, and New Zealand.

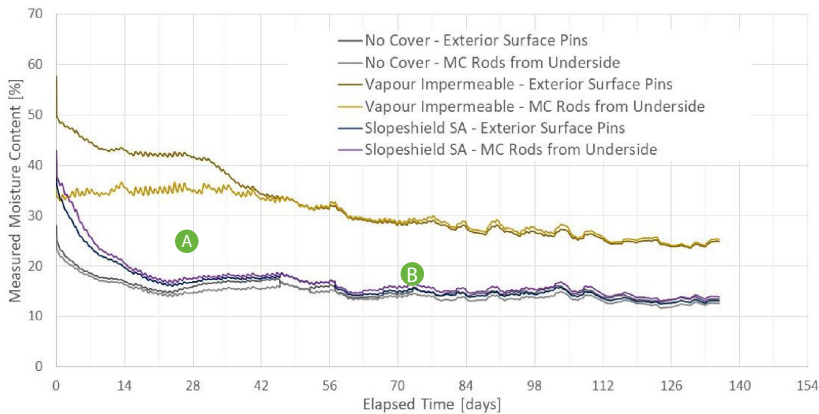
Warranty

A 20-year material warranty is available.

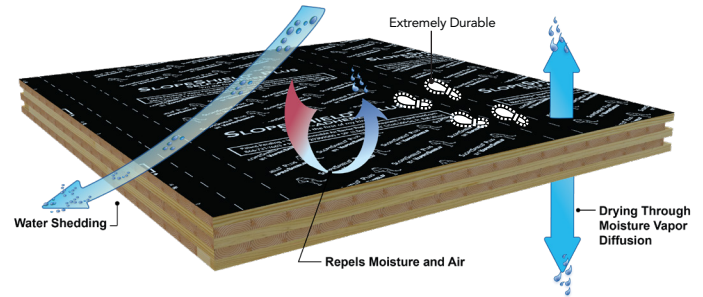
MASS TIMBER MOISTURE PROTECTION PRODUCT DATA SHEET

SlopeShield Plus Self-Adhered, WrapShield IT Integrated Tape, PanelShield SA

Comprehensive Mass Timber Moisture Protection



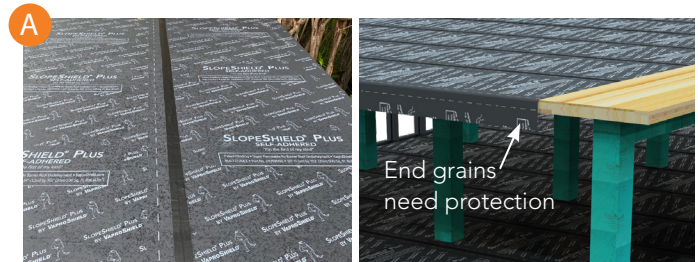
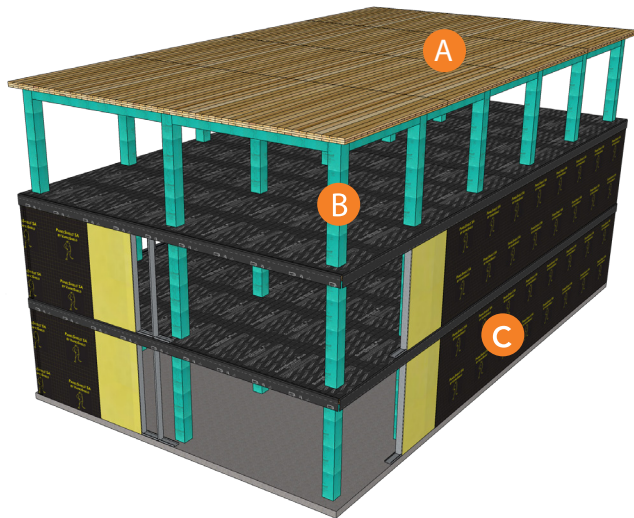
SlopeShield Plus SA



A In a drying study, conducted by RDH Building Science Laboratories, SlopeShield Plus SA allowed a wet (42% moisture content) mass timber panel to dry to **below 20% moisture content in 14 days**.

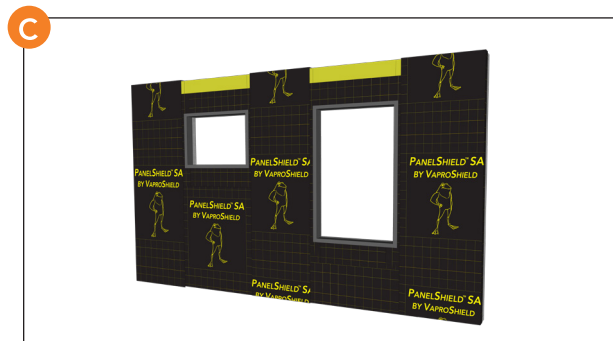
B At 60 days the SlopeShield Plus SA has **maintained** the mass timber panel **moisture content at 15%**, while the impermeable membrane, with little drying capacity, shows a moisture content at 30%, clearly in the danger zone for decay, mold, and staining to occur.

Slopesield Plus SA vapor permeable moisture protection **does not inhibit drying**. The design allows **moisture vapor to escape** while concurrently **blocking liquid water and air**, compared to a vapor barrier that can indefinitely delay drying and trap moisture, causing unseen rot and decay.



Install SlopeShield Plus SA over mass timber roof deck/floor deck to protect it from moisture intrusion and construction damage. Tape all seams using VaproTape. Note: PanelShield SA is a light duty alternative for interior floors.

End grains are especially susceptible to water intrusion. By allowing SlopeShield Plus SA to overhang the structure, end grains are protected when water is squeegeed off the deck.



As the wall substrate is erected install a VaproShield continuous vapor permeable air barrier to protect walls and rough openings.



Wrap post/columns and beams with WallShield IT to protect against moisture intrusion and construction damage. Use VaproTape to hold seams together when required.

MASS TIMBER MOISTURE PROTECTION PRODUCT DATA SHEET

SlopeShield Plus Self-Adhered, WrapShield IT Integrated Tape, PanelShield SA

PHYSICAL PROPERTIES			
PROPERTY	SlopeShield Plus Self-Adhered	WallShield IT Integrated Tape	PanelShield SA
Color	Black with White Lettering (top)	Green (top), White (back)	Black/Yellow
Thickness	0.51 mm (20 mil)	0.56 mm (22 mil)	0.45 mm (18 mil)
Membrane Weight	447 g/m ² (1.46 oz/ft ²)	191.4 g/m ² (0.627 oz/ft ²)	355.64 g/m ² (1.17 oz/ft ²)
Roll Weight	50.6 lbs (23.0 kg)	34 lbs (15 kg)	48.6 lbs (22 kg)
Roll Dimensions	59" x 102' (1.5 m x 31.1 m)	59" x 164' (1.5m x 50m)	59" x 102' (1.5m x 31.1m)
Roll Coverage	500 ft ² (46.6 m ²)	807 ft ² (75 m ²)	500 ft ² (46.65 m ²)
Skid	25 rolls	20 rolls	25 rolls
Field Exposure Before Enclosed or Permanent Cladding/Roofing System	180 days (6 months)	180 days (6 months)	12 months
Low Slope (≤ 2:12) Minimum Application Temperature	35°F (1.67°C) and rising and min. 5° above the dew point	Unlimited	20°F (-6°C)
Steep Slope Minimum Application Temperature	20°F (-6.7°C) and rising	Unlimited	20°F (-6°C)
Service Temperature	minus 40°F (-40°C) - 250°F (121°C)	minus 40°F (-40°C) - 183°F (84°C)	minus 40°F (-40°C) to 250°F (121°C)

Testing

Tested to industry standards for vapor permeable roofing underlayment air barrier materials.

View individual product data sheets for industry standard testing data.

Installation

STORAGE AND HANDLING

Store materials on end in original packaging at temperatures between 40°F and 120°F (4.4°C and 48.9°C). Protect materials from direct sunlight and inclement weather until ready for use.

SAFETY

CAUTION: Release liners are slippery. To prevent injury, liner should be removed from under foot as soon as membrane is installed and disposed of properly.

Work crews are safe around VaproShield membranes they contain zero VOCs or toxins.

Persons who access any roofs, involved with roof construction, repair or maintenance shall use appropriate personal protective equipment including, but not limited to, hard hats, eye protection, and leather gloves and must be trained on safe practices relevant to their work.

Where the use of ladders, scaffolds, platforms, or temporary floors are utilized, safety lines and safety harnesses shall be used. Please access the OSHA Web site at www.osha.gov, contact your local OSHA office, or visit the local federal bookstore to obtain the most current information on OSHA 29 CFR 1926.

PREPARATION

For self-adhered membranes all surfaces must be dry, sound, clean, "as new" condition, and free of oil, grease, dirt, excess mortar or other contaminants detrimental to the adhesion of the roofing underlayment or WRB air barrier. Fill voids and gaps in substrate greater than ½" (12.7 mm) in width to provide an even surface.

BEST PRACTICE INSTALLATION

SlopeShield Plus SA

Install SlopeShield Plus SA over mass timber roof deck/floor deck, tape all seams using VaproTape.

Protect base of post/columns by cutting SlopeShield Plus SA to post/column base width and wrap around the base of the post/column. Remove release film and adhere to roof deck/floor deck and up posts/columns to the height of the topping slab surface. Cut strips of SlopeShield Plus SA and notch to protect corners. Remove release film and adhere to roof deck/floor deck and post/column. Use VaproTape to cover all seams and edges of the SlopeShield Plus SA.

WallShield IT

Wrap post/columns and beams with WallShield IT to protect against moisture intrusion and construction damage. Use VaproTape to hold seams together when required.

PanelShield SA

All overlaps must be a minimum of 3" (8 cm) on vertical and horizontal seams. Inside and outside vertical corner overlaps should be a minimum 6" (15 cm) in both directions, staggered a minimum of 24" (61 cm), and should not occur directly above or below windows or doors. Use a roller to activate pressure-sensitive adhesive.

Visit VaproShield.com for complete installation instructions and details.

LIMITATIONS

SlopeShield Plus Self-Adhered should be covered within 180 (6 months) of installation with permanent roofing/flooring material. Minimum low slope roof (≤ 2:12) installation temperature above 35°F (1.67°C) and rising and at least 5° above the dew point.

- Weather conditions, dew, application temperature, installation techniques, and moisture can affect the bond of SlopeShield Plus SA and accessory components.

SlopeShield Plus Self-Adhered, WrapShield IT Integrated Tape, PanelShield SA

LIMITATIONS CON'T

- Apply only in dry conditions.
- Ensure all sealants, tapes, and membrane laps are properly rolled and verify bond quality after installation.
- Do not expose the membrane to ponding water.
- Provide positive drainage on all surfaces.
- Do not apply hot asphalt or hot rubber directly to the membrane surface.
- Use extra caution during overnight or early morning installations, as dew can form quickly and be difficult to detect on the black membrane surface.

PanelShield SA should be covered with cladding within 12 months of field assembly. Minimum field assembly recommended installation temperature of 20° F (- 6.0° C) and rising.

If desired adhesion is not attained between membranes due to site conditions, VaproShield recommends applying a bead of VaproBond as an additional solution to pressure rolling.