VAPROSHIELD®
Breathable Membrane Systems for Roofs & Walls

# PanelShield™ SA

a vapor permeable air barrier (AB) water resistive barrier (WRB) sheet membrane
Product No.: 19309099

# PanelFlashing™

Product No.: 43305500

## Product Description

PanelShield SA is a vapor permeable, self-adhered water resistive barrier membrane that protects the building envelope by allowing vapor to pass through (breathable) but not air or liquid water.

**BASIC USE**

Designed for commercial, panelization, modular and residential construction applications, PanelShield SA creates a water resistive air barrier when applied outside of the wall sheathing and behind the exterior wall cladding. PanelFlashing is used for transitions, rough openings, fenestrations, and full-wall applications.

**MATERIALS**

PanelShield SA consists of a proprietary polyacrylic coating on spun-bond polyester fabric with a specially formulated adhesive that firmly grips to substrates.

**BENEFITS**

**Aggressive adhesive** ensures membrane adhesion on multiple substrate types including plywood, OSB, gypsum sheathing, concrete and steel. Excellent adhesion at laps and seams.

**12 month UV and weather exposure** makes membrane ideal for long-term projects.

**Continuous adhesive** allows superior adhesion requiring no primer.

**All season weather installation** membrane can be applied in virtually all weather conditions including below freezing 20°F (-6°C) and rising without the use of primer.

**Cost effective** permeable polyester air barrier WRB system solution.

**Tough, durable and resilient** withstands aggressive construction handling on the jobsite, in the factory, and during cross-country transport.

**Drying capacity of 26 perms** allow substrates to dry-out reducing the risk of damage from moisture infiltration, mold, mildew and rot for the life of the building.

**Material is not effected by surfactants.**

**Accelerates installation process** with non-directional positioning and requires only basic tools for cutting and rolling.

**Eliminate surface preparation,** membrane can span gaps up to 7/8" (22.2mm) and requires zero primer.

**Ensures crew safety and a healthy building,** no VOC exposure, no primers, or protective gear required for installation.

**Compatible with all VaproShield rough opening flashing** accessories eliminating the need for untested outside components.

**Air barrier** stops air infiltration, passes ASTM E2178 materials test and ASTM E2357 Air Barrier assembly test.

## Compatible Substrates

- Exterior Gypsum Sheathing
- Rigid Insulation
- OSB
- Concrete
- Brick
- Plywood
- Metal (Steel, Aluminum)
- Fiberglass Window and Door Frames

**Contact VaproShield Technical** – if you have additional substrate or technical questions.

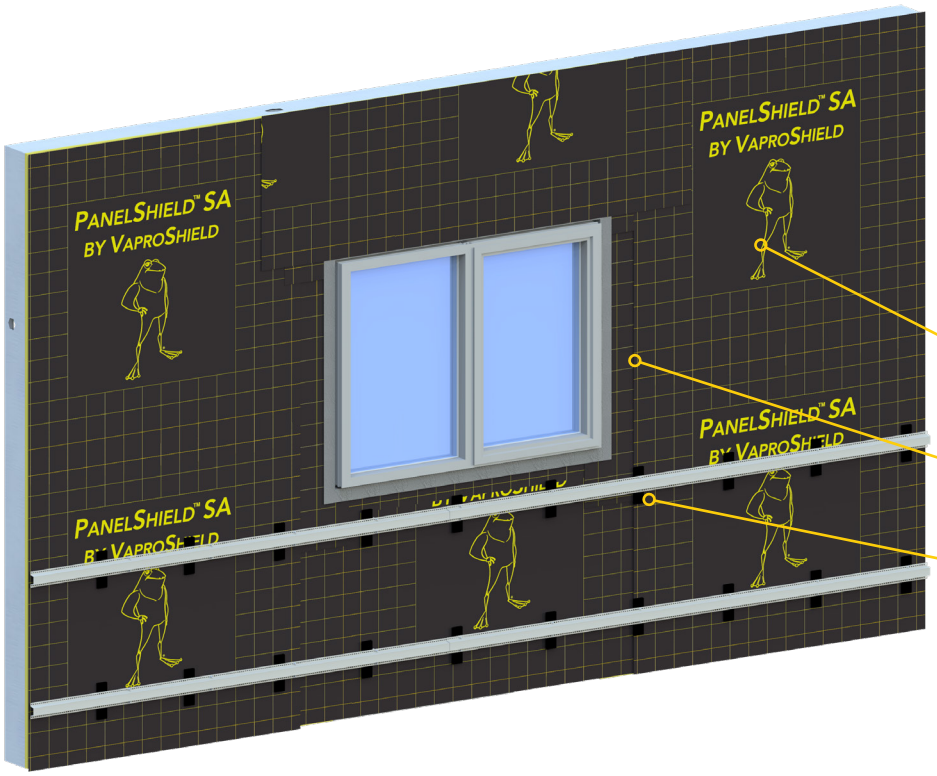
## Technical Data & Environmental

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

Tested to industry standards for air barrier and water resistive barriers.

| PHYSICAL PROPERTIES | |
|---|---|
| PROPERTY | RESULT |
| Color | Black/Yellow |
| Thickness | 0.37 mm (15 mil) |
| Membrane Weight | 275.7 g/m² (0.904 oz/ft²) |
| Roll Weight (with release film) | 40 lbs (18 kg) |
| Roll Dimensions | 59" x 102' (1.5m x 31m) |
| Roll Coverage | 500 ft² (46.65 m²) |
| Skid | 25 Rolls |
| Primer | No Primer Required |
| VOCs | None |
| Field Exposure Before Permanent Cladding | 12 months |
| Minimum Application Temperature | 20° F (-6°C) |
| Service Temperature | Minus 40°F (-40°C) to 250°F (121°C) |
| Warranty | 20 year material warranty |

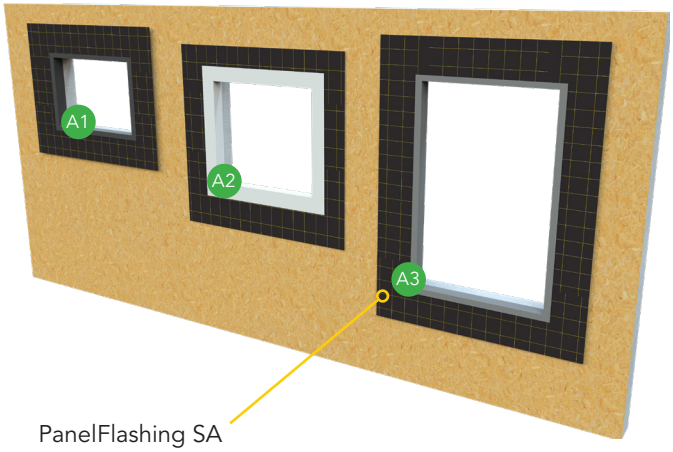
# *Complete Vapor Permeable Air Barrier WRB System*



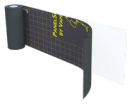

AIR BARRIER WRB: PANELSHIELD SA

A ROUGH OPENING FLASHING OPTIONS

B RAIN SCREEN COMPONENTS: VaproShim SA




PanelFlashing SA

| PanelFlashing SA | | |
|---|---|---|
| Product | Part No. | Roll Sizes |
| PanelFlashing SA Roll  | 43305500 | 11 ¾" x 102', 100 S/F (298mm x 31m, 9.3 S/M) |

## A ROUGH OPENING FLASHING OPTIONS

The following rough opening flashing components can be used:

- A1 VaproLiqui-Flash™
- A2 BlockFlashing™
- A3 VaproBond™

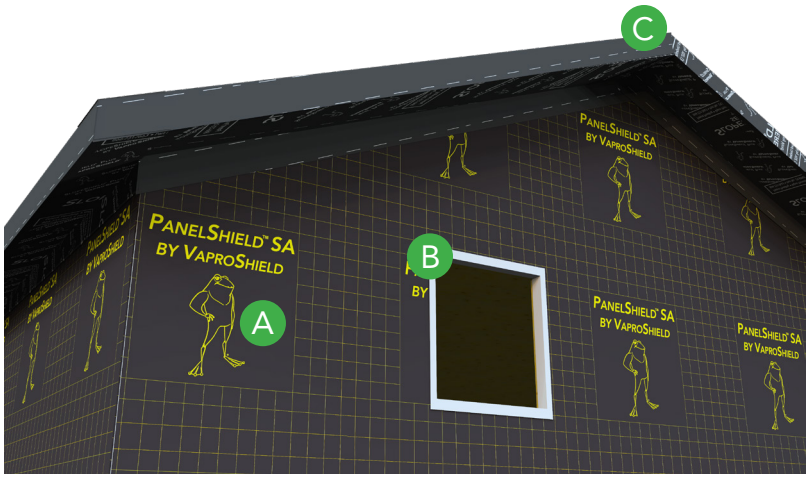
Reference individual data sheets for comprehensive information at VaproShield.com.

| Window and Rough Openings Flashing |  Vapro-Liqui-Flash |  BlockFlashing |  VaproBond |
|---|---|---|---|
| Application Temperature | 35°F to 110°F (1.7°C to 43°C) | 20°F (-6.6°C) and rising | 20°F to 120°F (-6.7°C to 49°C) |
| Drying Capacity Breathable Permeability | High | None | Low |

*Additional flashing options available at VaproShield.com*

Visit VaproShield.com to review other air barrier WRB solutions that offer sustainability attributes and for use with open joint cladding.

# Complete Vapor Permeable Air Barrier System




A **PanelShield SA** air and water resistive membrane installed on the walls, can be exposed to all types of weather elements **up to 12 months** before final closed joint cladding is installed.

B **PanelFlashing** pre-cut field membrane, **combined with BlockFlashing** creates a cost effective rough opening solution.

C **Add SlopeShield Plus Self-Adhered roofing membrane** and create a true air and watertight wall assembly with drying capacity to mitigate moisture damage.

### RELATED LEED CREDITS

VaproShield membranes qualify for LEED credits. Visit VaproShield.com for the latest sustainability and LEED information.

## Installation

### STORAGE AND HANDLING

Store material rolls on end in original packaging. Protect rolls from direct sunlight and inclement weather until ready for use.

### SAFETY

Work crews are safe around VaproShield membranes. PanelShield SA contains zero VOCs or toxins.

### PREPARATION

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 water resistive air barrier membrane and flashings. Fill voids and gaps in substrate greater than 7/8 inch (22.2 mm) in width to provide an even surface.

**For retrofit projects with existing substrates, contact VaproShield Technical to review adhesion compatibility.*

### BEST PRACTICE INSTALLATION

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 www.VaproShield.com for complete installation instructions and details.

### LIMITATIONS

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.

## Availability

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

## Warranty

A 20-year material warranty is available.

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| TESTING DATA | | |
|---|---|---|
| PROPERTY | STANDARD | RESULT |
| **Strength** | | |
| Dry Tensile Strength<br>≥ 20 lbs/in | ASTM D828 Standard Test Method for Tensile Properties of Paper and Paperboard Using Constant-Rate-of-Elongation Apparatus | MD – 6.6 N/mm (37.7 ibs/in) |
| Dry Breaking Force (Grab method)<br>MD ≥40 XMD ≥35 | ASTM D5034 Standard Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test) | MD – 529 N (119 lbsf)<br>CD – 427 N (96 lbsf) |
| Cold Mandrel Bend Test | AC38 Section 3.3.4 | Warp (Machine) Direction - No cracking<br>Filling (Cross) Direction - No cracking |
| Weathering Tests | AC38 Section 4.1.2 UV Exposure<br>AC38 Section 4.1.3 Accelerated Aging | UV - No visual change<br>UV & Accelerated - visibly lighter, no visible deterioration |
| **Water Vapor Transmittance** | | |
| Water Vapor Transmission<br>Dynamic Relative Humidity Measurement (23°C 50 %RH) | ASTM E398 Standard Test Method for Water Vapor Transmission Rate of Sheet Materials Using Dynamic Relative Humidity Measurement | 26.02 Perm (grain/h•ft²•inchHg)<br>1489 ng/Pa•s•m² |
| **Adhesion Testing** | | |
| 90˚ Peel Adhesion | AAMA 711 | PASS |
| **Air Resistance Testing** | | |
| Air Permeance | ASTM E2178 @75 Pa Standard Test Method for Air Permeance of Building Materials | 0.0001 L/s•m² @ 75 Pa (0.0000 cfm/ft² @ 1.57 psf) |
| Air Barrier | ASTM E2357 Standard Test Method for Determining Air Leakage of Air Barrier Assemblies | <0.01 L/s•² @ 75 Pa (<0.002 cfm/ft² @ 1.57 psf) |
| Air Barrier | ASTM E283 Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen | <0.01 L/s•m² @ 75 Pa (<0.01 cfm/ft² @ 1.57 psf) |
| **Water Resistance Testing** | | |
| Nail Sealability | ASTM D1970/ Section 7.9 Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection | Pass - Review Fastener Penetrations Technical Bulletin at VaproShield.com |
| Water Resistance<br>(Boat Test) | ASTM D779 Standard Test Method for Water Resistance of Paper, Paperboard, and Other Sheet Materials by the Dry Indicator Method (Withdrawn 2011) | Control - No leakage<br>Weathered - No Leakage |
| Water Resistance<br>(Control after Weathering) | AATCC 127 Hydrostatic pressure test (550 mm water column for 5 hours), American Association of Textile Chemists and Colorists | Control - No leakage<br>Weathered - No Leakage |
| **Fire Testing** | | |
| Flame Spread<br>Smoke Developed | ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials | Flame Spread 0<br>Smoke Developed 20 |
| Cone Calorimeter Testing Data | ASTM E1354 Standard Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter | Time to ignition: 7 sec<br>Flame Duration: 78 sec<br>Ave. Effective Heat of Combustion: 6.1 MJ/kg<br>Ave. HRR at 60 sec: 58 kW/m²<br>Ave. HRR at 180 sec: 62 kW/m²<br>Peak HRR: 132 kW/ m²<br>Time of Peak: 52 sec.<br>Total HRR/A: 6.5 MJ/m² |