VAPROSHIELD®
Breathable Membrane Systems for Roofs & Walls

WrapShield SA® Self-Adhered

a highly vapor permeable Water Resistive Barrier (WRB) and Air Barrier (AB) sheet membrane: Product No.: 24109090

WrapFlashing SA Self-Adhered

Product No.: 46105590 / 46108090

Product Description

WrapShield SA Self-Adhered WRB/Air Barrier membrane protects the building envelope by allowing vapor to pass through (breathable) but not air or liquid water mitigating costly moisture damage and saving energy for the life of the building.

BASIC USE

WrapShield SA Self-Adhered is installed above grade behind rain screen wall cladding assemblies.

MATERIALS

WrapShield SA Self-Adhered consists of multiple layers of spun-bonded polypropylene fabric with a proprietary, fully self-adhered pressure sensitive adhesive that allows for initial re-positioning prior to rolling.

BENEFITS

Superior building envelope protection – high drying capacity (50 perms) allows building materials to dry-out, reducing the risk of damage from moisture infiltration, mold, mildew and rot for the life of the building.

Air tight barrier – stops air infiltration as per the ASTM E2357 Air Barrier assembly test, ABAA approved.

Consistent millage thickness – factory made rolled good ensures consistent properties and performance.

Fully tested building envelope system – rough opening flashing accessories eliminate the need for untested outside components.

Simple installation – requires only basic tools, no specialized mobilizations or protection gear are required.

Apply to clean and dry-to-the-touch "as new" substrates, no additional preparation is required.

Spans substrate joint gaps up to 7/8" (22.2mm), eliminates need for tapes and fillers.

Phase construction ready, install in below freezing temperatures, non-directional installation, sustains up to 180 days UV and climate exposure prior to cladding installation.

Emits zero VOCs, contains no Red List Chemicals, ensuring crew safety and a healthy building.

Compatible Substrates

- Exterior Gypsum Sheathing
- Rigid Insulation
- Precast Concrete
- Concrete Block
- Cast-in-place Concrete
- Plywood
- Pre-painted Steel
- Galvanized Metal
- Aluminum (Painted/Mill Finish)
- Anodized Aluminum
- Vinyl Window and Door Frames
- Fiberglass Window and Door Frames

For OSB and other substrates contact VaproShield Technical.

Contact VaproShield Technical – if you have additional substrate questions.

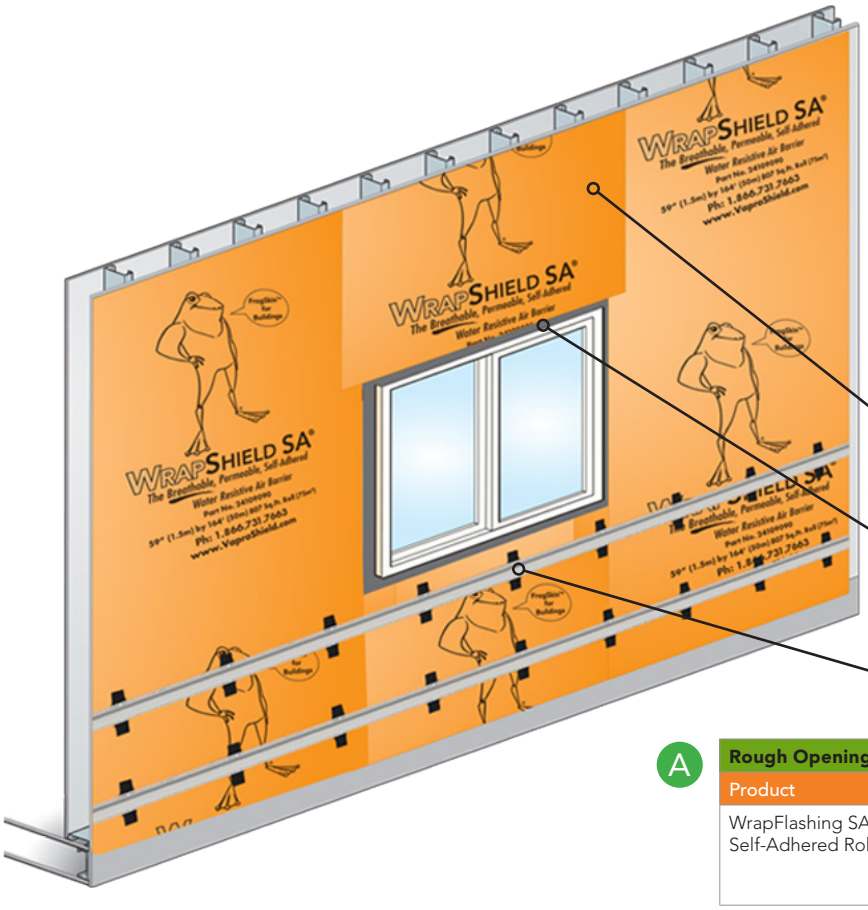
Technical Data & Environmental

Tested to industry standards for Weather Resistive Barriers and approved by ABAA to meet requirements for Air Barriers. WrapShield SA Self-Adhered emits zero VOCs and is void of all Living Building Challenge Red List chemicals, making the membrane safe for work crews and occupants for the life of the building.

DECLARE LABEL

WrapShield SA Self-Adhered System a self-adhered water-resistive vapor-permeable air barrier sheet membrane system with liquid flashing has earned the Declare Label, placing VaproShield at the forefront of the transparency movement.

PHYSICAL PROPERTIES	
PROPERTY	RESULT
Color	Orange (top), White (back)
Thickness	0.5743 mm (22.61 mil)
Membrane Weight	249.6 g/m² (0.818 oz/ft²)
Roll Weight	54 lbs (24.5 kg)
Roll Dimensions	59" x 164' (1.5m x 50m)
Roll Coverage	807 sq. ft. (75 sq. m.)
Skid	16 Rolls
VOCs	None
Exposure Before Permanent Cladding	180 days maximum
Minimum Application Temperature	20 °F (-6.6 °C)
Service Temperature	minus 40 °F (-40 °C) - 225 °F (107 °C)
Warranty	20 year material warranty



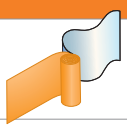
Complete Building Envelope System

WRB/AIR BARRIER
WrapShield SA Self-Adhered

A ROUGH OPENING FLASHING OPTIONS

B RAIN SCREEN COMPONENTS
pictured: VaproShim SA

A

Rough Opening Flashing Membrane		
Product	**Part No.**	**Roll Sizes**
WrapFlashing SA Self-Adhered Roll 	46105590 46108090	Roll Size: 11 3/4" x 164' (298mm x 50m) 161 S/F (15 S/M) Roll Size: 19 2/3" x 164' (500mm x 50m) 269 S/F (25 S/M)

A ROUGH OPENING FLASHING OPTIONS

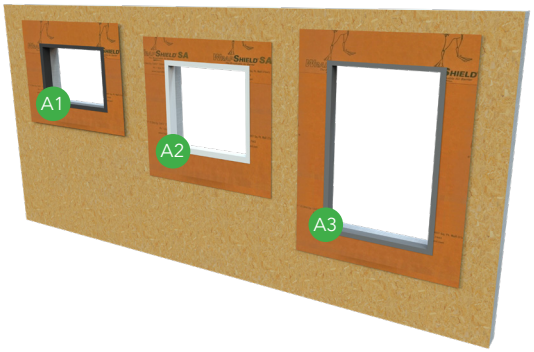
The following rough opening flashing can be used:

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

Reference individual data sheets for comprehensive information.

In conjunction with:

Window and Rough Openings Flashing	VaproLiqui-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



Visit VaproShield.com to review additional flashing options.

VaproMat™

Hydrophobic filter fabric with polypropylene drainage matrix, installs over WrapShield SA Self-Adhered membrane, available in two depths: 3mm, 7mm.

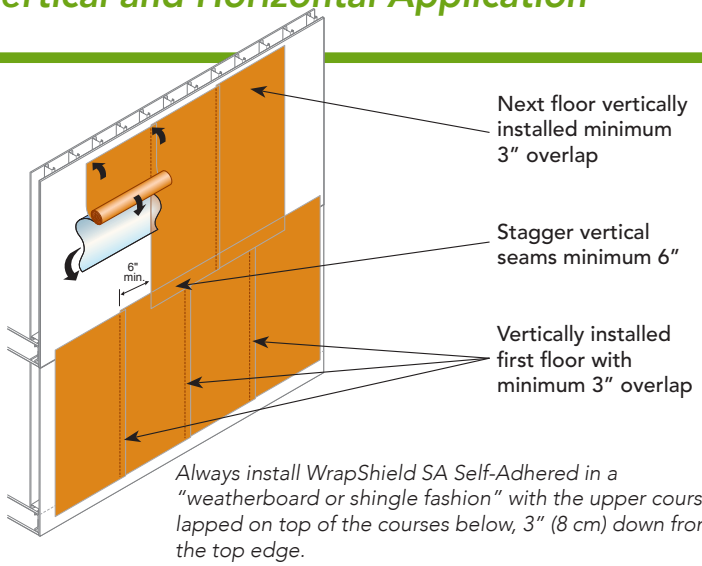
VaproShim SA™ Self-Adhered

Simple, cost effective neoprene accessory, creates a rain screen drainage plane and air/water tight seal for fastener penetrations, available in two thicknesses: 1/8" (3mm), 1/4" (6mm).

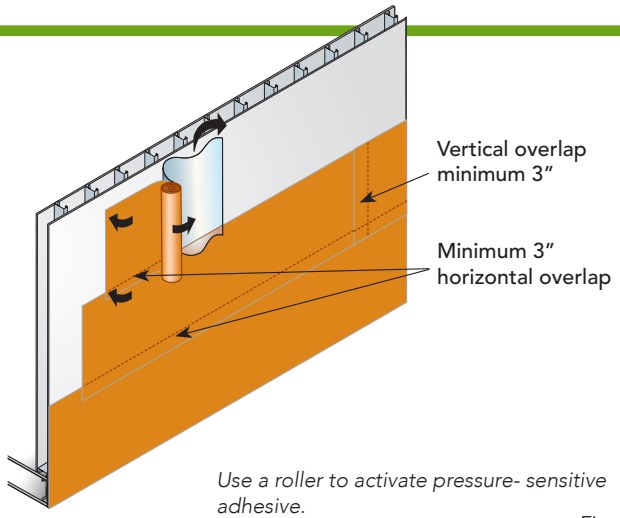
B RAIN SCREEN COMPONENTS

WrapShield SA Self-Adhered membrane shall have a ventilated, unimpeded vertical drainage cavity or rain screen system incorporated into all WRB/AB installations. VaproMat™ or VaproShim SA™ Self-Adhered accomplish this, and are available as a corresponding accessory. View corresponding Product Data Sheets for in-depth information.

Vertical and Horizontal Application



Always install WrapShield SA Self-Adhered in a "weatherboard or shingle fashion" with the upper courses lapped on top of the courses below, 3" (8 cm) down from the top edge.



Use a roller to activate pressure- sensitive adhesive.

Fig. 1

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. WrapShield SA Self-Adhered contains zero VOCs, toxins or Red List Chemicals.

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. WrapShield SA is installed on most substrates without primer. Specific jobsite conditions may require additional surface preparation with primer, contact VaproShield Technical. Fill voids and gaps in substrate greater than $^{7}/_{8}$ inch (22.2 mm) in width to provide an even surface. Strike masonry joints full-flush.

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. See Fig. 1. Use a roller to activate pressure-sensitive adhesive.

Visit www.VaproShield.com for complete installation instructions and instructional videos.

LIMITATIONS

WrapShield SA Self-Adhered should be covered within 180 days of installation.

Minimum recommended application temperature of 20˚ F (- 6˚ C) and rising.

Do not contaminate WrapShield SA Self-Adhered membrane with building site chemicals which make it more wettable (e.g., surfactants). This will adversely affect its water resistance and therefore its contribution to the water resistance of the overall wall system.

Flash fenestrations per window and door manufacturers' recommendations, local building code requirements, ASTM and AAMA guidelines.

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.

VAPROSHIELD® Breathable Membrane Systems for Roofs & Walls

TESTING DATA		
PROPERTY	STANDARD	RESULT
Strength		
Dry Tensile Strength ≥ 20 lbf/in	ASTM D828 Standard Test Method for Tensile Properties of Paper and Paperboard Using Constant-Rate-of-Elongation Apparatus	6.1 N/mm (34.8 lb/in)
Dry Breaking Force (Grab method) MD ≥40 XMD ≥35	ASTM D5034 Standard Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test)	MD – 391 N (88 lb/in) XMD – 369 N (83 lb/in)
Cold Mandrel Bend Test	AC38 Section 3.3.4	Warp (Machine) Direction - No cracking Filling (Cross) Direction - No cracking
Weathering Tests	AC38 Section 4.1.2 UV Exposure AC38 Section 4.1.3 Accelerated Aging	UV - No visual change UV & Accelerated - visibly lighter, no visible deterioration
Water Vapor Transmittance		
Water Vapor Transmission Desiccant Method, Procedure A, 24.4°C (76.0°F) 50 %RH	ASTM E96 Standard Test Methods for Water Vapor Transmission of Materials	40.45 Perm (grain/h•ft²•inchHg) 2314 ng/Pa•s•m²
Water Vapor Transmission Water Method, Procedure B, 24.4°C (76.0°F) 50 %RH	ASTM E96 Standard Test Methods for Water Vapor Transmission of Materials	50.45 Perm (grains/hr•ft²•inchHg) 2886 ng/Pa•s•m²
Water Vapor Transmission 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	52.57 Perm (grain/h•ft²•inchHg) 3008 ng/Pa•s•m²
Adhesion Testing		
Adhesion to backing	ASTM D3330 method B	PASS
Peel Adhesion 90˚ Peel Adhesion, 24 hours	AAMA 711 Section 5.3	PASS
Accelerated Aging and UV Exposure 90˚ Peel Adhesion, 24 hours	AAMA 711 Section 5.4	PASS
Elevated Temperature 122° F (50 °C) for 7 days) 90˚ Peel Adhesion, 24 hours	AAMA 711 Section 5.5	PASS
Thermal Cycling 90˚ Peel Adhesion, 24 hours	AAMA 711 Section 5.6	PASS
Water Immersion Peel Adhesion	AAMA 711 Section 5.6	PASS
Resistance to Peeling from Itself 90° Peel Adhesion 24 hours	AAMA 711 Section 5.9 & Annex 2	DensGlas Gold No peeling, buckling or ripping Plywood No peeling, buckling or ripping Concrete No peeling, buckling or ripping CMU No peeling, buckling or ripping
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•m² @ 75 Pa (<0.01 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 (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 Weathered - No Leakage
Water Resistance (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 Weathered - No Leakage
Static Water Penetration Test	ASTM E331 Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference"	Mockup tested at 15 psf for 15 minutes, No leaks

TESTING DATA		
PROPERTY	STANDARD	RESULT
Fire Testing		
Flame Spread Smoke Developed	ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials	Flame Spread 5 Smoke Developed 15
NFPA 285 Compliant	ASTM E1354 Standard Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter	View over 50 compliant assemblies with various manufacturers at VaproShield.com or Contact VaproShield Technical Team, 1-866-731-7663 opt. 5
Air Leakage Rate	CAN/CGSB 51.32 – Sheathing Membrane, Breather Type	PASS
Multiple	CAN/ULC-S742-11	Classification A1 - PASS