

WrapShield® RS Rain Screen

a mechanically attached, water resistive (WRB) vapor permeable air barrier (AB) membrane with built-in rain screen drainage matrix: Product No: 3mm: 27109092, 7mm: 27109094

WrapFlashing SA

Product No.: 46105590 / 46108090

Product Description

WrapShield RS Rain Screen is a WRB/Air Barrier membrane with built-in rain screen drainage matrix that protects the building envelope by allowing vapor pass through (breathable) but not air or liquid water, mitigating costly moisture damage and saving energy for the life of the building. The drainage matrix (3mm or 7mm) maintains an unimpeded vertical drainage plane behind the cladding.

BASIC USE

WrapShield RS Rain screen is installed above grade behind wall cladding assemblies such as wood siding, metal siding, masonry veneers, stucco, veneer stone, and mechanically attached EIFS.

MATERIALS

WrapShield RS Rain Screen consists of multiple layers of spun-bonded polypropylene with clear integrated horizontal tape and pre-marked lap template. The rain screen drainage matrix is bonded in the factory.

BENEFITS

Superior building envelope protection – high drying capacity (59 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.

Factory installed clear integrated tape – seals horizontal seams ensuring the upper layer shingles over the lower layer creating the 6" shingled effect.

Factory installed drainage matrix – is available in two (2) depths: 3mm or 7mm.

Drainage matrix - creates unimpeded vertical drainage plane behind cladding

One step installation – of WRB/Air Barrier and rain screen cavity reduces installation time

Air tight barrier – stops air infiltration as per the ASTM 2357 Air Barrier assembly test

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.

Install on dry and/or saturated substrates – eliminates additional water accumulation by locking out liquid water, allowing vapor diffusive drying and helping to "dry in" the build.

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

Phase construction ready, install in all temperatures sustains up to 180 days UV and climate exposure prior to cladding installation.

Emits zero VOCs, no primer required, ensuring crew safety and a healthy building.

Compatible Substrates

- OSB
- 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

Contact VaproShield Technical – if you have additional substrate questions.

RELATED LEED CREDITS

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

Technical Data & Environmental

Passed and tested to industry standards for Weather Resistive Barriers and ASTM E2273 Drainage Test.

WrapShield RS Rain Screen emits zero VOCs, making the membrane safe for work crews and occupants for the life of the building.

3mm

7mm

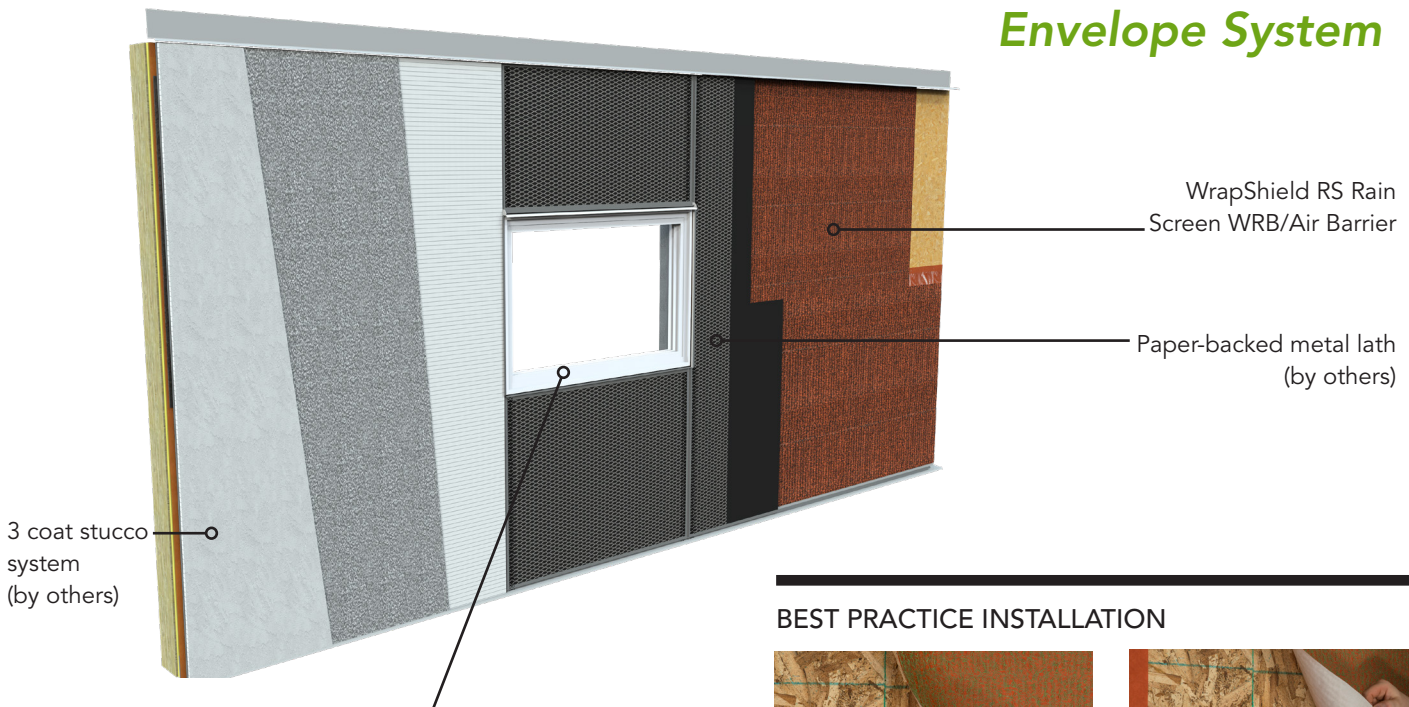


Two rain screen drainage matrix options, 3mm and 7mm, offer cost saving options and work with conventional siding, stucco, stone, trim and windows.

PRODUCT DATA SHEET

WrapShield RS Product No.: 3mm: 27109092, 7mm: 27109094 / WrapFlashing SA, Product No.: 46105590 / 46108090

Complete Building Envelope System



ROUGH OPENING FLASHING OPTIONS

The following rough opening flashing components can be used:

- VaproLiqui-Flash™
- BlockFlashing™
- VaproBond™

Reference individual data sheets for comprehensive information.

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

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)	0°F to 180°F (-18°C to 82°C)	20°F to 120°F (-6.7°C to 49°C)
Drying Capacity	High	None	Low
Breathable Permeability			
Application Method	Sausage Gun / Putty Knife or Brush	Utility Knife / J-Roller	Sausage Gun / Putty Knife

Visit VaproShield.com to review additional flashing options.

BEST PRACTICE INSTALLATION



Secure membrane with stainless steel staples **above** integrated tape. Align the bottom of the upper course with the dotted line for proper 6" (15 cm) overlap.



Join horizontal seams by peeling back both release films. Tape seals horizontal seams.

BEST PRACTICE VERTICAL SEAMS



Upper course is now properly shingled over the lower course, eliminating water concerns at the horizontal joints.



Center piece of WrapFlashing SA Self-Adhered behind joint.



Place joints of WrapShield RS onto WrapFlashing SA.

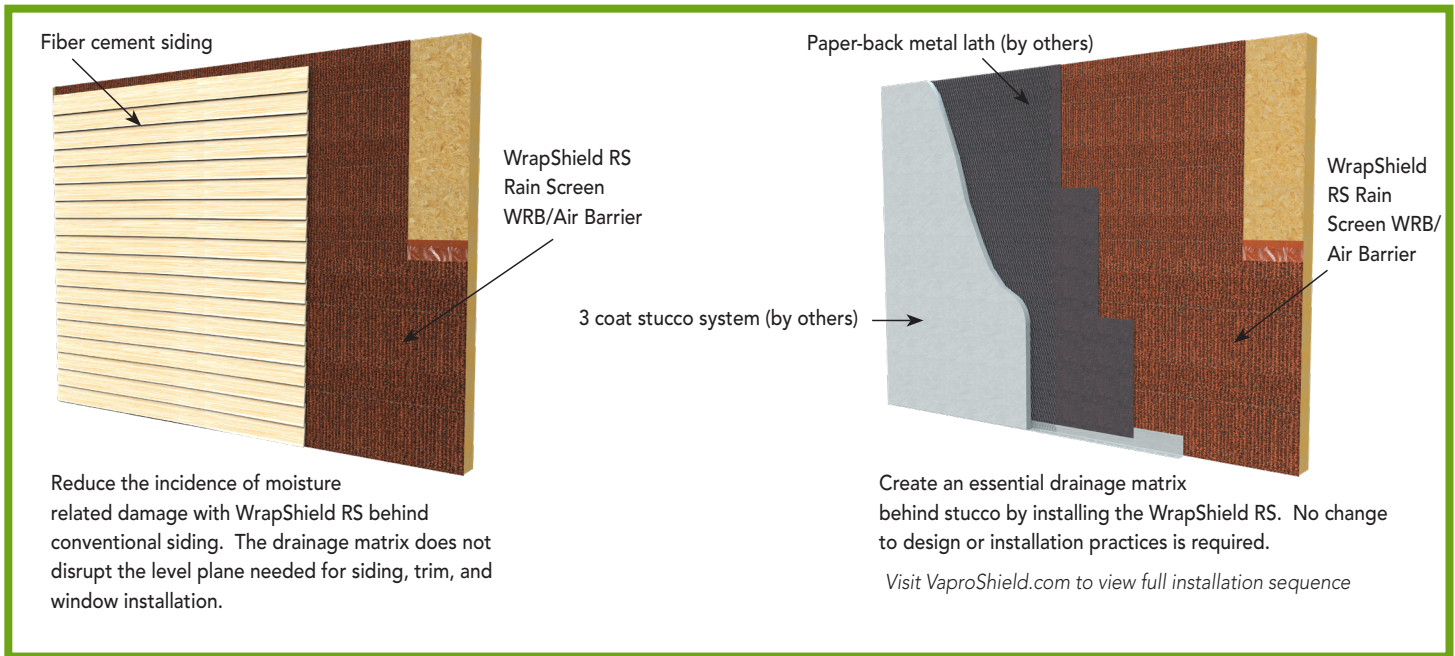


Finished vertical joint. For complete installation instructions, visit VaproShield.com

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WrapShield RS Rain Screen Applications



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 RS Rain Screen 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. Strike masonry joints full-flush.

BEST PRACTICE INSTALLATION

Install WrapShield RS with approved fasteners in a horizontal, shingle fashion.

Horizontal overlaps must be 6" (15 cm) to properly seal the integrated tape joint.

Vertical overlaps must be minimum 12" (30 cm) and require WrapFlashing SA Self-Adhered.

Vertical overlaps are to be staggered a minimum of 24" (61 cm) and should not occur directly above or below windows or doors.

Inside and outside corners can be continuous, or if a vertical joint occurs within 24" horizontally, an overlap of 12" minimum in both directions is required, providing a double layer at the corner.

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

LIMITATIONS

WrapShield RS Rain Screen should be covered within 180 days of installation.

Do not contaminate WrapShield RS Rain Screen WRB/Air Barrier 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.

WrapShield RS Rain Screen WRB/Air Barrier should not be subjected to asphaltic materials, chemicals, surfactants, or cleaning compounds that could affect the water resistance of the membrane surface; if exposed, replace effected membrane.

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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PHYSICAL PROPERTIES		
PROPERTY	WrapShield RS 3mm	WrapShield RS 7mm
Color	Orange/Green Mesh	Orange/Black Mesh
Thickness	0.56 mm (22 mil) + 3mm matrix	0.56 mm (22 mil) + 7mm matrix
Membrane Weight	200.333 g/m ² (0.657 oz/ft ²)	247.333 g/m ² (0.811 oz/ft ²)
Roll Weight	20 lbs (9 kg)	22 lbs (10 kg)
Roll Dimensions	53" x 37.5' (1.3m x 11.4m)	53" x 37.5' (1.3m x 11.4m)
Roll Coverage	165 S/F (15.3 S/M)	165 S/F (15.3 S/M)
Skid	20 Rolls	12 Rolls
VOCs	None	
Ultra Violet Light Exposure	180 days maximum	
Minimum Application Temperature	Unlimited	
Service Temperature	minus 40°F (-40°C) - 225°F (107°C)	
Warranty	20 year material warranty	

TESTING DATA		
PROPERTY	STANDARD	RESULT
Strength		
Dry Tensile Strength (≥ 3.5 N/mm)	ASTM D828 Standard Test Method for Tensile Properties of Paper and Paperboard Using Constant-Rate-of-Elongation Apparatus	MD - 6.76 N/mm (38.6 lb/in) XMD - 4.08 N/mm (23.3 lb/in)
Dry Tensile Strength	ASTM D882 Standard Test Method for Tensile Properties of Thin Plastic Sheeting	Control - 8.89 N/mm (50.8 lb/in) UV Exposure - 8.16 N/mm (46.6 lb/in) UV + Heat Exposure - 8.16 N/mm (46.6 lb/in)
Dry Breaking Force (Grab method) MD ≥40 lbf (180 N) XMD ≥35 lbf (160 N)	ASTM D5034 Standard Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test)	MD - 577.2 (129.8 lbf) CD - 429.1 N (96.47 lbf)
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	21 Perm (grain/h•ft ² •inchHg) 1201 ng/Pa•s•m ²
Water Vapor Transmission Desiccant Method, Procedure B, 24.4°C (76.0°F) 50 %RH	ASTM E96 Standard Test Methods for Water Vapor Transmission of Materials	66.9 Perm (grains/hr•ft ² •inchHg) 3828 ng/Pa•s•m ²
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	71.91 Perm (grain/h•ft ² •inchHg) 4114 ng/Pa•s•m ²
Air Resistance Testing		
Air Permeance	ASTM E2178 @75 Pa Standard Test Method for Air Permeance of Building Materials	0.0004 L/s•m ² @ 75 Pa (0.0001 cfm/ft ² @ 1.57 psf)
Air Barrier	ASTM E2357 Standard Test Method for Determining Air Leakage of Air Barrier Assemblies	<0.01 L/s•m ² @ 75 Pa (<0.01 cfm/ft ² @ 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•m ² @ 75 Pa (<0.01 cfm/ft ² @ 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
Drainage Test	ASTM E2273 Standard Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish Systems (EIFS) Clad Wall Assemblies	Exceeds Required 90%