VAPROSHIELD®
Breathable Membrane Systems for Roofs & Walls

SlopeShield® Plus Self-Adhered

an air barrier and permeable vapor retarder membrane with self-drying technology

Roll Size: 59" Product No.: 29309000/Roll Size: 29.5" Product No.: 41303400

SlopeFlashing

Product No.: 41308000

Product Description

SlopeShield Plus SA is a multi-purpose air barrier and permeable vapor retarder membrane. It protects roof assembly materials by controlling vapor to pass through (breathable) while concurrently blocking liquid water and air —mitigating costly moisture damage and saving energy for the life of the building.

BASIC USE

SlopeShield Plus SA can be used as:

- Dedicated air barrier and moisture control layer, within the roofing assembly, in new, reroof construction, steep slope and residential applications
- Permeable vapor retarder air barrier in recover/reuse roofing projects
- Concrete surface protection
- Mass timber roof deck/floor deck as the structure is erected

MATERIALS

SlopeShield Plus Self-Adhered is a spun-bond polyester fabric with proprietary coatings on the top and underside. The underside is a fully self-adhered aggressive, patented, pressure sensitive adhesive that **does not require primer on most roofing substrates** protected by a siliconized release film, which is removed during installation.

BENEFITS

Air leakage and moisture management - exceptional air barrier and permeable vapor retarder, curbing air leakage and managing moisture within the building envelope.

Moisture reduction - transitions to an air barrier and permeable vapor retarder within the finished roof assembly, thereby greatly reducing condensation and other air movement issues.

High temp resistance – specially formulated to withstand temperatures up to 300°F (148.9°C).

Substrate self-drying technology – facilitates drying of existing components such as insulation, concrete, wood, and lightweight insulating concrete decks allowing for component reuse.

Code compliant – engineered to meet/exceed standards set forth in IECC and IBC.

Sustainable roofing solutions - supports sustainable roofing practices by allowing the reuse of existing insulation and components in reroofing scenarios, diverting construction debris from the landfill.

Extremely durable, 180 days exposure, slip resistant, UV stable, walkable, and allows heavy machinery to be used on the surface, offering temporary weather protection and allowing the building to remain functional and occupied.

Emits zero VOCs over service life helping to ensure a healthy building.

Compatible Substrates

- Gypsum/Fiber Roof Sheathing Boards
- Rigid Insulation
- Concrete (bull float finish or better)
- Plywood
- Mass Timber - all types
- Pre-painted Steel
- Galvanized Metal
- Steel Deck
- Aluminum (Painted/Mill Finish)
- OSB and most OSB factory-coated products

Roof Materials

- Metal Roofing
- Cedar Shingles/Shakes with VaproMat™
- Slate and Tile
- Modified Bitumen
- Metal - Class A roof assembly with 1/4" thermal board
- Tile - Class A
- Single-Ply

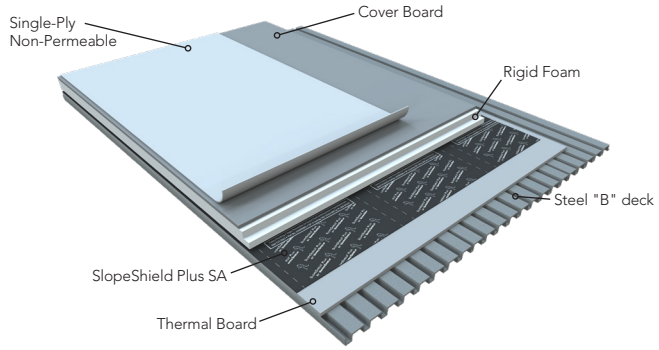
SlopeShield Plus SA has been reviewed and approved for use within many roofing manufacturers' assemblies and, in some cases, can be included in full system warranties. For more details, contact your local VaproShield representative.

Technical Data & Environmental

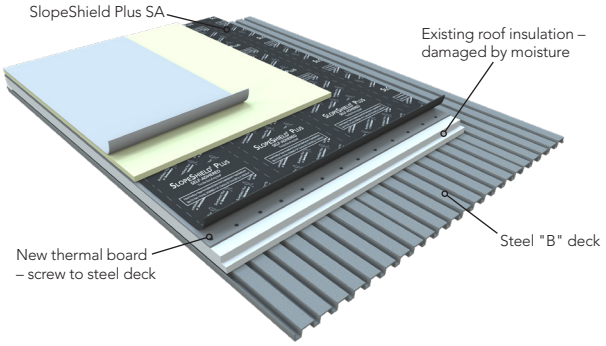
Environmental Product Declaration (EPD) third-party verified. ISO 21930 and ISO 14025 North American compliant.

PHYSICAL PROPERTIES	
PROPERTY	RESULT
Color	Black with White Lettering (TOP)
Thickness	0.02 in (0.51 mm) (20 mil)
Membrane Weight	447 g/m² (1.46 oz/ft²)
59" Roll Dimensions	59" x 102' (1.5 m x 31.1 m), 500 ft² (46.6 m²) gross, 50.6 lbs (23.0 kg) (1.56 oz/ft²)
29" Roll Dimensions	29.5" x 102' (749mm x 31.1m), 275 ft² (23.3m²) gross 25 lbs (11 kg) (1.56 oz/ft²)
Primer	No Primer Required
VOCs	None
Exposure Before Permanent Roofing Materials	180 days (6 months)
Low Slope (≤ 2:12) Minimum Application Temperature	35°F (1.67°C) and rising and min. 5° above the dew point
Steep Slope Minimum Application Temperature	20°F (-6.7°C) and rising
Service Temperature	minus 40°F (-40°C) - 300°F (148.9°C)
High Temp Resistance	300°F (148.9°C)
Warranty	20 year material warranty

New Construction and Reroof Detail Examples

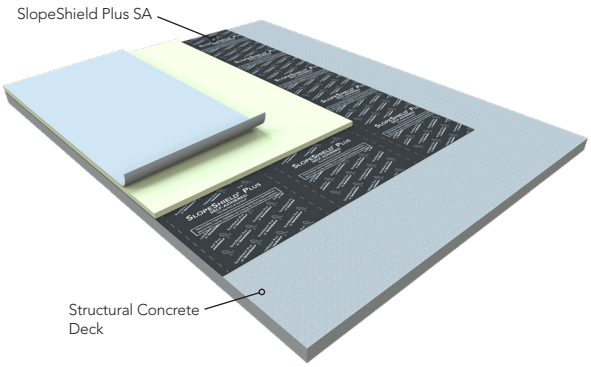


Typical Roof Cross-Section: Apply SlopeShield Plus SA to top of thermal board.

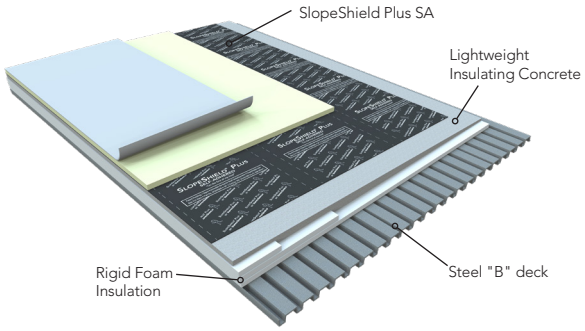


Re-Roofing: Installing SlopeShield Plus SA on new thermal board applied over existing insulation allows for the drying and reuse of existing insulation.

Concrete Surface Protection



Structural Concrete Deck: SlopeShield Plus SA can be applied over green concrete or a damp existing concrete and lightweight insulating concrete roof decks, provided the surface complies with a bull float finish or better.



Lightweight Concrete Deck: Apply SlopeShield Plus SA directly to concrete roof deck.

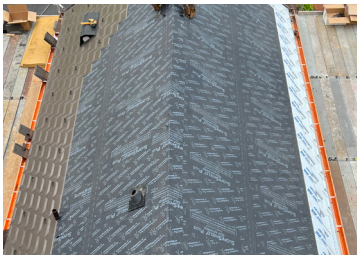
Steep Slope Roofs



Standing Seam Metal Roof
Optional use of VaproShim SA Self-Adhered under metal roof clips creates increased airflow under metal panels



Cedar Shingles/Shakes
With VaproMat™ Drainage Matrix

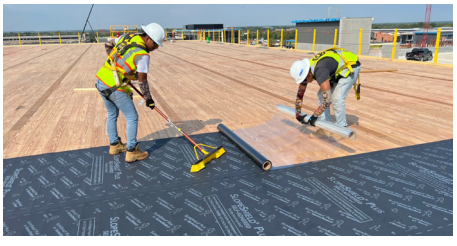


Slate Roof



High End Residential

Mass Timber Protection

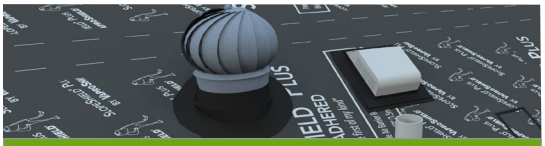


Install SlopeShield Plus SA over mass timber roof deck/floor deck to protect it from moisture intrusion and construction damage. See separate product data sheet at VaproShield.com.

FLASHING OPTIONS

Self-adhered air barrier flashing shall be SlopeFlashing™ for eaves, hips, ridges, and valleys.

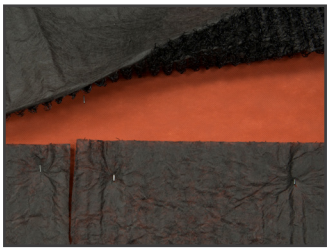
Flashing Membrane		
Product	Part No.	Roll Sizes
SlopeFlashing 		Roll Size: 19 2/3" x 102' (500mm x 31m), 167 S/F (15.5 S/M)



Penetration Sealants		
Product	 VaproLiqui-Flash™ (20 oz.)	 VaproBond™ (20 oz.)
Part No.	38609801	60309800
Application Temperature	35°F to 110°F (1.7°C to 43°C)	20°F to 120°F (-6.7°C to 49°C)

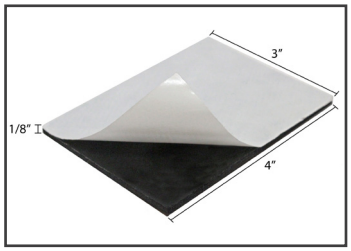
Reference individual data sheets for comprehensive information.

VAPROMAT™



Hydrophobic filter fabric with polypropylene drainage matrix, available in two depths: 3mm, 7mm.

VAPROSHIM SA™ SELF-ADHERED



Simple, cost effective neoprene accessory, creates a drainage plane and air/water tight seal for fastener penetrations, available in 1/8"x 3"x 4" (3 x 76 x 102mm).

VAPROTAPE™



VaproTape is a single-sided, black, UV stable, water and airtight tape available in multiple widths. It is required in some SlopeShield Plus SA applications.

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

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.

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.

TEMPORARY WEATHER PROTECTION

When using SlopeShield Plus SA on low slope roofs as temporary weather protection VaproTape is required on all seams. VaproTape must be rolled with a weighted roller to ensure proper adhesion. View installation instructions at VaproShield.com for details.

PREPARATION

All surfaces be must be in sound, clean condition, and free of oil, grease, dirt, excess mortar or other contaminants detrimental to the adhesion of the roofing underlayment and flashings. Fill voids and gaps in substrate greater than ½" (12.7 mm) in width to provide an even surface. Field verify adhesion to intended substrate.

BEST PRACTICE INSTALLATION

Install SlopeShield Plus Self-Adhered and related accessories according to manufacturer's separate written installation instructions. All side and head laps must be a minimum of 3" (7.5 cm).

SlopeShield Plus SA can be installed in a shingle fashion, perpendicular to the roof slope, with VaproTape in low lying areas, such as drains, valleys, etc. 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 material.

Low slope roofs (≤ 2:12) installation temperature above 35°F (1.67°C) and rising and at least 5° above the dew point.

Steep slope roofs installation temperature above 20°F (-6.7°C) and rising.

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

LIMITATIONS CON'T

- 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.

Availability

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

Warranty

A 20-year material warranty is available.

SlopeShield Plus Self-Adhered - Full Width Roll Part No.: 29309000 / SlopeShield Plus Self-Adhered - Half Width Roll Part No.: 41303400

TESTING DATA

PROPERTY	STANDARD	RESULT
Strength		
Dry Breaking Force (Grab method) Percent Elongation	ASTM D5034 Standard Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test)	MD – 31% XMD – 40%
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 – 23.6 N/mm (135 lbf/in.) XMD – 19.8 N/mm (113 lbf/in.)
Tensile Strength	ASTM D2523 Standard Practice for Testing Load-Strain Properties of Roofing Membranes	MD – 2.8 N/mm (16 lbf/in) XMD – 1.4 N/mm (8 lbf/in)
Percent Elongation	ASTM D2523 Standard Practice for Testing Load-Strain Properties of Roofing Membranes	MD – 36 % XMD – 40 %
Puncture Resistance	ASTM E154 Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover	Puncture Strength 636 N (143 lbf) Peak Deflection 43.4 mm (1.71 in)
Tear Resistance (Tongue Tear)	ASTM D5601 Standard Test Method for Tearing Resistance of Roofing and Waterproofing Materials and Membranes	MD – 70.3 N (15.8 lbf) XMD – 64.5 N (14.5 lbf)
Tear Resistance (Tongue Tear)	ASTM D4073 Standard Test Method for Tensile-Tear Strength of Bituminous Roofing Membranes	MD – 427 N (96.1 lbf) XMD – 273 N (61.3 lbf)
Low Temperature Flexibility @ -45.6°C (-50°F)	ASTM D5147 Standard Test Methods for Sampling and Testing Modified Bituminous Sheet Material	MD – PASS XMD – PASS
Static Puncture Resistance	ASTM D5602 Standard Test Method for Static Puncture Resistance of Roofing Membrane Specimens	PASS Concrete 445 N (100 lbf) PASS Insulfoam IX 222 N (50 lbf)
Water Vapor Transmittance		
Water Ponding Test AC 48 Acceptance Criteria for Self-Adhered Roof Underlayments for use as Ice Barriers. Section 4.4 Water-Ponding Test	Three control specimens and three aged specimens are prepared. A 2-inch-diameter (51 mm) cylindrical tube with a 24-inch (610 mm) height of distilled water is sealed onto the specimen surface for a period of 48 hours. The drop in the water column from the original 24-inch (610 mm) height is to be reported in hundredths of an inch. The presence of any moisture on specimens shall be reported.	PASS
Water Vapor Transmission Water Method 22.8°C (73°F) 50%RH	ASTM E96 Standard Test Methods for Water Vapor Transmission of Materials	30 Perm (grain/h•ft²•inchHg) 1716 ng/Pa•s•m²
Water Vapor Transmission Dynamic Relative Humidity Measurement 23°C (73.4°F) 50%RH	ASTM E398 Standard Test Method for Water Vapor Transmission Rate of Sheet Materials Using Dynamic Relative Humidity Measurement	30 Perm (grain/h•ft²•inchHg) 1716 ng/Pa•s•m²
Air Resistance Testing		
Air Permeance	ASTM E2178 @75 Pa Standard Test Method for Air Permeance of Building Materials	0.00437 L/(s x m²) @ 75 Pa (0.00086 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 ASTM D7349 Standard Test Method for Determining the Capability of Roofing and Waterproofing Materials to Seal around Fasteners	PASS
Water Ponding	ICC-ES AC48 Acceptance Criteria for Self-Adhered Roof Underlayments for use as Ice Barriers.	PASS
Fire Approvals		
UL	UL790 Test Method of Fire Tests for Roof Coverings, CAN/ULC-S107	PASS
Fire Testing		
Flame Spread Smoke Developed	ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials	Class A Flame Spread 5 Smoke Developed 45
Approvals		

FM APPROVED

CLASSIFIED C UL US
BASE/PLY SHEET FOR ROOFING SYSTEMS AS TO AN EXTERNAL FIRE EXPOSURE SEE UL DIRECTORY OF PRODUCTS CERTIFIED FOR CANADA AND UL ROOFING MATERIALS AND SYSTEMS DIRECTORY (R40823)

COMMERCIAL ROOFING AIR/VAPOR RETARDER
FLORIDA BUILDING CODE APPROVED
NEMO EVALUATED FBC FL 46829

STEEP SLOPE UNDERLAYMENT
FLORIDA BUILDING CODE APPROVED
NEMO EVALUATED FBC FL 41811

NEMO|cert.® CERTIFIED

EPD Hub
VERIFIED ISO 14025