

THE VAPROSHIELD SYSTEMS APPROACH

VaproShield promotes a systems approach to building envelope design, incorporating Breathable Membranes for roofs and walls resulting in High Performance Building Envelope Systems.

Complete System of Breathable Membranes + Rain Screen Design Components + 3D Window Flashing Elements = High Performance Building Envelope Solutions

SlopeShield with Integrated Tape is a mechanically attached **vapor permeable, weather resistive, roofing underlayment** with continuous **Integrated Tape**, designed as a secondary back-up under metal roofing material.

With a rating of **59 perms**, **SlopeShield** provides the **highest vapor permeability** in a commercial quality, breathable roofing underlayment.

Drying Capacity

- High permeability and exceptional water holdout capacity helps to prevent liquid water intrusion, reducing the incidence of mold, mildew, wood rot, lumber distortion and metal corrosion. The continuous Integrated Taped vertical seams reduce the potential of water intrusion through open laps or surface exposed tapes on roof slopes of 3 and 12 and rising.

Construction and Installation

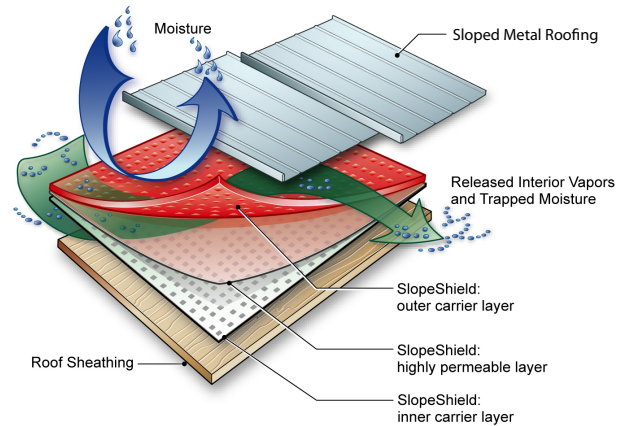
- High permeability rating (59 perms) allows wet sheathings to dry quickly, allowing installation during inclement weather
- Textured surface helps reduce slip risks
- Lightweight, wide 59" (1.5 meters) rolls install quickly and easily down the slope of the roof

Durability and Cost Effectiveness

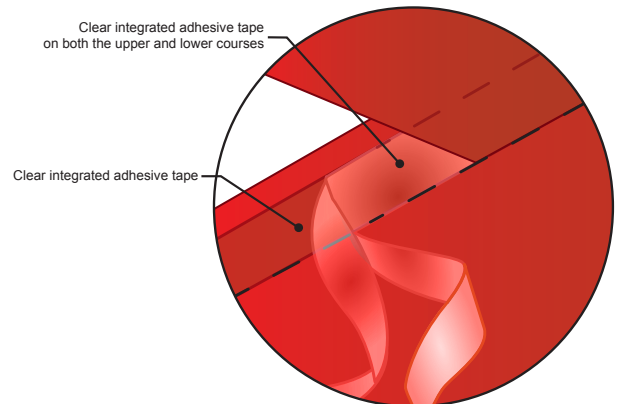
- High tear, rip and puncture resistant during and after construction reducing repairs and labor costs
- Installs easily and quickly, mechanically attaching directly to plywood, OSB and other substrates decreasing installation time
- SlopeShield can be installed over wet substrates

Environmental Sustainability

- Contributes to LEED points in Indoor Environmental Quality and Energy & Atmosphere
- Is 100% recyclable

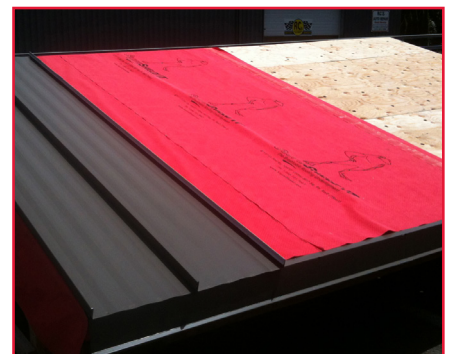


SlopeShield membrane construction illustrating the release of interior vapors and moisture



Integrated Tape can be sealed in all weather conditions, creating a permanent seal at lap conditions.

Labor Saving Vertical Installation



SlopeShield's unique Integrated Tape joints offer significant labor savings, allowing vertical installation concurrent with the metal roofing.

SLOPESHIELD[®] TESTING

Tested in accordance with ICC-ES AC 48 (Acceptance Criteria for Roof Underlayments for use in severe climate areas), and AC 207 (Acceptance Criteria for Polypropylene Roof Underlayments), to meet UBC, IBC and IRC requirements for Roofing Underlayments.

PROPERTY	STANDARD/TEST	RESULTS		
Tensile Strength	ASTM D1682 AC 48, Section 4.1	Control MD – 106.7 lbf/inch (18.7 N/mm) XMD – 83.8 lbf/inch PASS	Accelerated Aged MD – 107.0 lbf/inch (18.7 N/mm) XMD – 81.4 lbf/inch PASS	UV Exposed MD – 97.3 lbf/inch (17.0 N/mm) XMD – 76.7 lbf/inch PASS
Water Vapor Transmission and Permeance	ASTM E96* (Water Method) AC 207, Section 4.1	406.3 g/m ² 24hrs 3374.8 ng/Pa/s/m ² 59 Perms PASS		
Water Ponding	AC 48, Section 4.4 24" head of water for 48 hrs.	PASS		
Accelerated Aging	AC48, Section 4.7, AC207, Section 4.6	PASS		
UV Exposure	AC48, Section 4.8, AC207, Section 4.7	PASS		
Liquid Water Transmission	ASTM D4869 AC207, Section 4.3	PASS		
Rupture Resistance	ASTM D3462 AC207, Section 4.4	PASS		
Pliability	ASTM E48 AC 207, Section 4.2	PASS		

*ASTM E 96 - Method B (wet cup method) typically gives a more realistic result for permeance than does the Method A (dry cut/desiccant) method.

ROOF SLOPE	SLOPESHIELD WITH INTEGRATED TAPE	SLOPESHIELD SA SELF-ADHERED
1:12 to 2:12	For slip sheet applications only. (No water hold out)	For slip sheet applications only. (No water hold out)
2:12 to 3:12	For slip sheet applications only. (No water hold out)	<ul style="list-style-type: none"> Apply as Underlayment 12" Horizontal/Vertical Lap Seams VaproLiqui-Flash required under metal clips and similar penetrations
3:12 to 4:12	<ul style="list-style-type: none"> Apply as Underlayment Vertical Installation Only (Metal Roofing) VaproLiqui-Flash required under metal clips and similar penetrations 	<ul style="list-style-type: none"> Apply as Underlayment 12" Horizontal/Vertical Lap Seams VaproLiqui-Flash required under metal clips and similar penetrations
4:12 and greater	<ul style="list-style-type: none"> Apply as Underlayment 6" Vertical Lap as per the Integrated Tape VaproLiqui-Flash required under metal clips and similar penetrations 	<ul style="list-style-type: none"> Apply as Underlayment 6" Horizontal/Vertical Lap Seams VaproLiqui-Flash NOT required for clips

For slate tile or other roofing applications call VaproShield 1-866.731.7663 for review and approval.

INDUSTRY BEST PRACTICE

SlopeShield is **not to be used as a temporary roof covering** during the construction period. SlopeShield can sustain long term UV exposure but is not intended to be the primary liquid water hold out barrier. Temporary protection measures such as tarps must be used when rain, snow/ice or storms exist or are anticipated.