

# SlopeShield® Plus Self-Adhered

a highly vapor permeable roofing underlayment Air Barrier (AB) material: Product No.: 29309000

## SlopeFlashing

Product No.: 41308000 / 41303400

### Product Description

SlopeShield Plus Self-Adhered roofing underlayment protects the roofing assembly by allowing vapor to pass through (breathable) but not air or liquid—mitigating costly moisture damage and saving energy for the life of the building.

### BASIC USE

SlopeShield Plus Self-Adhered is installed on steep slope roofs of 2:12, (9.46 degrees), or greater pitch. Can be used on roof slopes below 2:12 (9.46 degrees) Contact VaproShield Technical Team for additional information.

### MATERIALS

SlopeShield Plus Self-Adhered consists of a spun-bond polyester fabric with proprietary coatings on the top and underside utilizing Vapor Permeable Polymer Composite Technology (VPPCT™). The top coating is slip resistant and UV-stable. The underside is a fully self-adhered adhesive protected by a siliconized release film, which is removed during installation.

### BENEFITS

SlopeShield Plus Self-Adhered is installed as a roofing underlayment, designed to promote long term drying of the roofing assembly through vapor diffusion as an alternate to vapor barrier products that eliminate diffusive drying. It protects the roofing assembly by allowing vapor to pass through (breathable) but not air or liquid water.

**Superior roof envelope protection** – high drying capacity (30 perms) allows building materials to dry out, reducing the risk of damage from moisture infiltration, mold, mildew and rot.

**Top surface is slip resistant**, UV stable, and resistant to punctures, tears, and foot traffic.

**Airtight barrier** – stops air infiltration as per the ASTM E2178 air permeance material test.

**High Temp Resistance** – specially formulated to withstand temperatures up to 250°F (121°C).

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

**Fully tested roofing system** – Flashing accessories that limit the need for untested outside components. All accessories are fully compatible with VaproShield wall membranes.

**Fully bonds without primer** – No primers are used or required for product installation.

**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 ½” (12.7 mm)**, eliminates need for tapes and fillers.

**Phase construction ready**, installs in below freezing temperatures, sustains up to 180 days of UV and climate exposure prior to roof system installation. Best practice always recommends coverage as soon as possible.

**Emits zero VOCs** ensuring crew safety and a healthy building.

- Gypsum/Fiber Roof Sheathing Boards
- Rigid Insulation
- Concrete
- Plywood
- Cross Laminated Timber (CLT)
- Nail Laminated Timber (NLT)
- Dowel Laminated Timber (DLT)
- Pre-painted Steel
- Galvanized Metal
- Aluminum (Painted/Mill Finish)
- \*For OSB and OSB factory-coated products contact VaproShield Technical.

### Compatible Substrates

- Metal Roofing
- Slate/Clay Tile with batten/counter-batten substructure
- Cedar Shingles/Shakes with VaproMat™

### Roofing System Compatibility

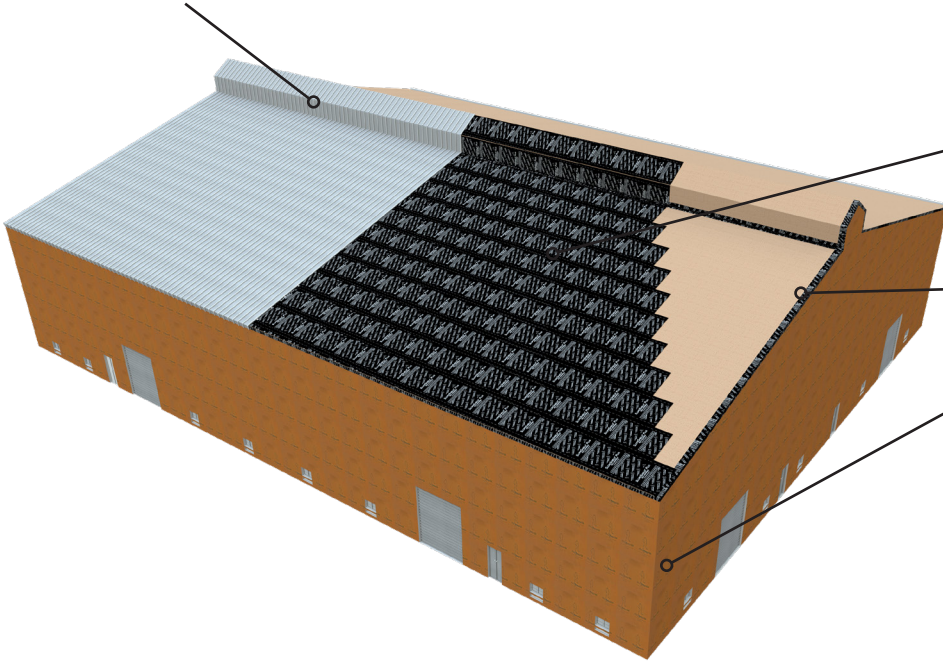
Contact VaproShield Technical if you have any additional substrate or roofing system questions.

### Technical Data & Environmental

| PHYSICAL PROPERTIES                         |                                                  |
|---------------------------------------------|--------------------------------------------------|
| PROPERTY                                    | RESULT                                           |
| Color                                       | Black with White Lettering (TOP)                 |
| Thickness                                   | 0.02 in (0.51 mm) (20 mil)                       |
| Membrane Weight                             | 447 g/m <sup>2</sup> (1.46 oz/ft <sup>2</sup> )  |
| Roll Weight (with release film)             | 50.6 lbs (23.0 kg)(1.56 oz/ft <sup>2</sup> )     |
| Roll Dimensions                             | 59" x 102' (1.5 m x 31.1 m)                      |
| Roll Coverage                               | 500 ft <sup>2</sup> (46.6 m <sup>2</sup> ) gross |
| Primer                                      | No Primer Required                               |
| VOCs                                        | None                                             |
| Exposure Before Permanent Roofing Materials | 180 days (6 months)                              |
| Minimum Application Temperature             | 20°F (-6°C)                                      |
| Service Temperature                         | minus 40°F (-40°C) - 250°F (121°C)               |
| High Temp Resistance                        | 250°F (121°C)                                    |
| Warranty                                    | 20 year material warranty                        |

## Complete Roof and Wall System

STANDING SEAM  
METAL ROOF



WATER-RESISTANT AND VAPOR PERMEABLE  
AIR BARRIER ROOF UNDERLAYMENT:  
SLOPESHIELD PLUS SELF-ADHERED

**A** SLOPEFLASHING

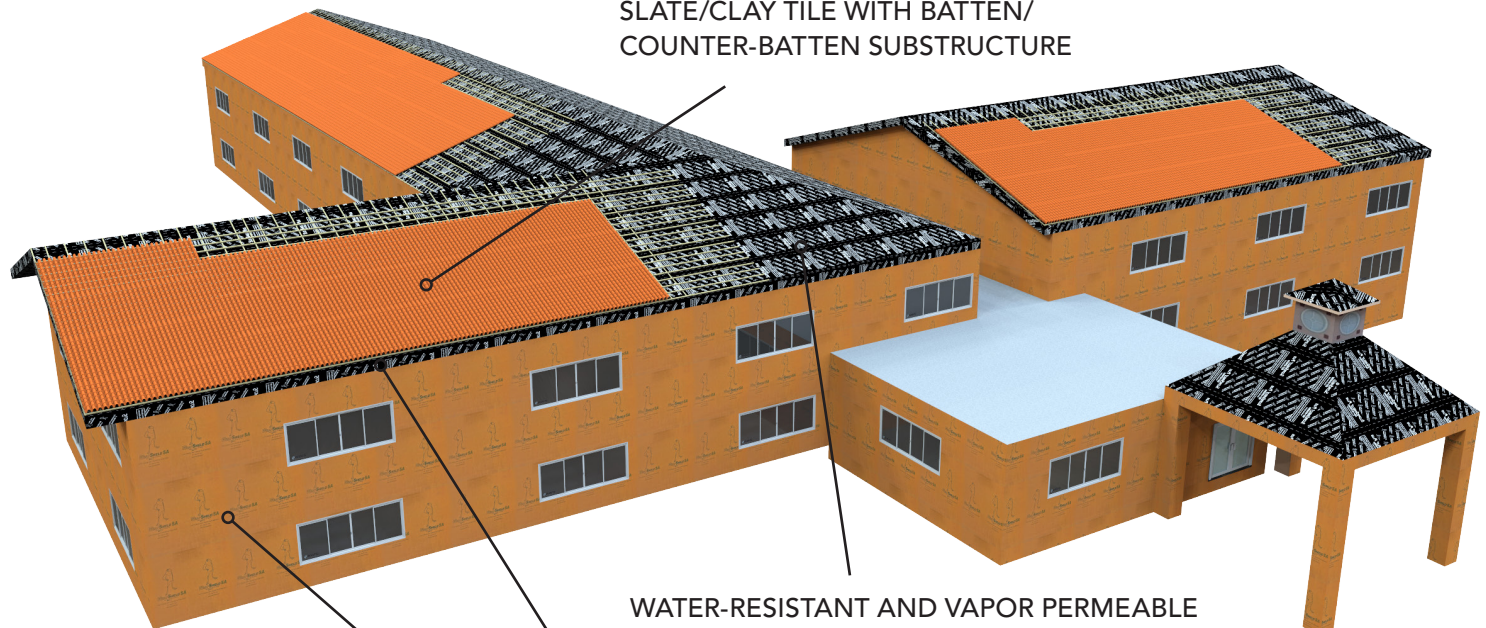
**B** WRB/VAPOR PERMEABLE  
AIR BARRIER WALL MEMBRANE

OPTIONS:  
for increasing air flow under metal roofing systems

**C** VAPROMAT DRAINAGE MATRIX

**D** VAPROSHIM SA SELF-ADHERED  
UNDER METAL ROOF CLIPS

SLATE/CLAY TILE WITH BATTEN/  
COUNTER-BATTEN SUBSTRUCTURE



WATER-RESISTANT AND VAPOR PERMEABLE  
AIR BARRIER ROOF UNDERLAYMENT:  
SLOPESHIELD PLUS SELF-ADHERED

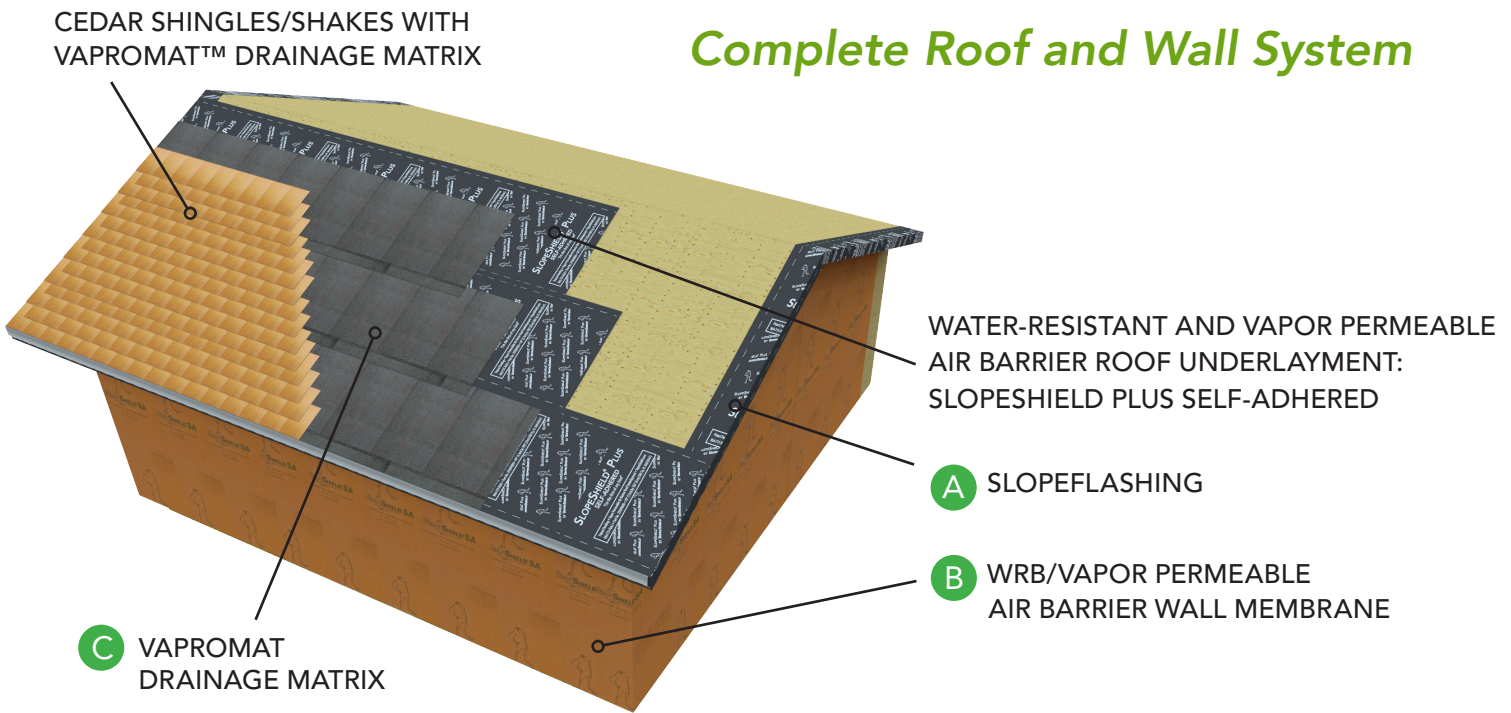
**A** SLOPEFLASHING

**B** WRB/VAPOR PERMEABLE  
AIR BARRIER WALL MEMBRANE



# PRODUCT DATA SHEET

SlopeShield Plus Self-Adhered Part No.: 29309000 / SlopeFlashing Part No.: 41308000 / 41303400



## A FLASHING OPTIONS

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

| Flashing Membrane |          |                                                             |
|-------------------|----------|-------------------------------------------------------------|
| Product           | Part No. | Roll Sizes                                                  |
| SlopeFlashing     | 41308000 | Roll Size: 19 2/3" x 102' (500mm x 31m), 167 S/F (15.5 S/M) |
|                   | 41303400 | Roll Size 29.5" x 102' (749 mm x 31m), 255 S/F (23 S/M)     |

## B BUILDING ENVELOPE SYSTEM

Self-Adhered WRB/Air Barrier Wall Membrane shall be: WrapShield SA Self Adhered or RevealShield SA Self Adhered for open joint cladding. View corresponding Product Data Sheets for in-depth information.



## C VAPROMAT™



Hydrophobic filter fabric with polypropylene drainage matrix, installs over SlopeShield Plus Self-Adhered roof underlayment, available in two depths: 3mm, 7mm. View corresponding Vapromat Product Data Sheet for in-depth information.

## D VAPROSHIM SA™ SELF-ADHERED

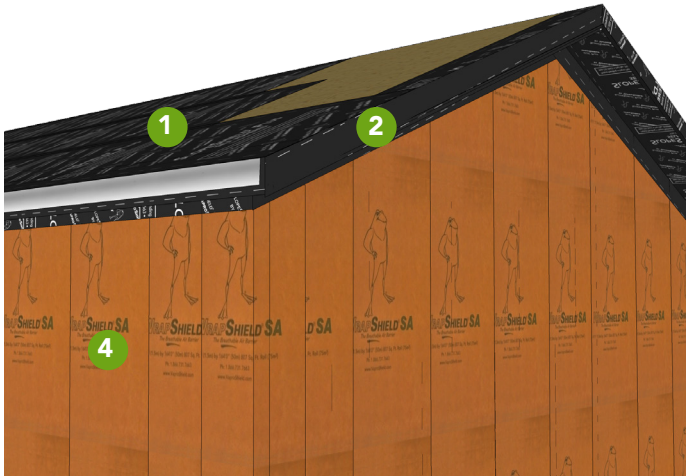


Simple, cost effective neoprene/EPDM accessory, creates a rain screen drainage plane and air/water tight seal for fastener penetrations, available in two thicknesses: 1/8" (3mm), 1/4" (6mm).

| Penetration Sealants    |                                      |                                      |                                 |
|-------------------------|--------------------------------------|--------------------------------------|---------------------------------|
| Product                 |                                      |                                      |                                 |
|                         |                                      |                                      |                                 |
|                         | <b>VaproLiqui-Flash™</b><br>(20 oz.) | <b>VaproLiqui-Flash™</b><br>(Gallon) | <b>VaproBond™</b><br>(20 oz.)   |
| Part No.                | 38609801                             | 38601500                             | 60309800                        |
| Application Temperature | 35°F to 100°F<br>(2°C to 38°C)       | 35°F to 100°F<br>(2°C to 38°C)       | -20°F to 120°F<br>(-6° to 49°C) |

Reference individual data sheets for comprehensive information.

## SlopeShield Plus SA Application



- 1 SlopeShield Plus SA roof underlayment
- 2 SlopeShield Plus SA on gables and eaves
- 3 SlopeShield Plus SA extending down, shingled over wall membrane
- 4 VaproShield WRB/Air Barrier wall membrane

## 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](http://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.

### 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 roofing underlayment and flashings. Fill voids and gaps in substrate greater than ½" (12.7 mm) in width to provide an even surface.

### BEST PRACTICE INSTALLATION

Install SlopeShield Plus Self-Adhered roofing underlayment and related accessories according to manufacturer's separate written installation instructions. All overlaps must be a minimum of 3" (8 cm) on horizontal seams. Shingled laps are required. See [www.VaproShield.com](http://www.VaproShield.com).

### LIMITATIONS

SlopeShield Plus Self-Adhered should be covered within 180 (6 months) of installation with permanent roofing material.

SlopeShield Plus Self-Adhered Roofing Underlayment Sheet is not intended to be the primary liquid water hold out system or temporary roof covering. Cover membrane as soon as practical.

Minimum recommended application temperature of 20°F (- 6.0°C) and rising.

### Availability

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

### Warranty

A 20-year material warranty is available.

# PRODUCT DATA SHEET

SlopeShield Plus Self-Adhered Part No.: 29309000 / SlopeFlashing Part No.: 41308000 / 41303400

## TESTING DATA

| PROPERTY                                                                                    | STANDARD                                                                                                                                                                                                                                                                                                                                                                                                  | RESULT                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Strength</b>                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                           |
| Dry Breaking Force (Grab method)<br>Percent Elongation                                      | ASTM D5034 Standard Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test)                                                                                                                                                                                                                                                                                                       | MD – 31%<br>XMD – 40%                                                                                                                                                                                                                                                                                                                     |
| 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 – 23.6 N/mm (135 lbf/in.)<br>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)<br>XMD – 1.4 N/mm (8 lbf/in)                                                                                                                                                                                                                                                                                    |
| Percent Elongation                                                                          | ASTM D2523 Standard Practice for Testing Load-Strain Properties of Roofing Membranes                                                                                                                                                                                                                                                                                                                      | MD – 36 %<br>XMD – 40 %                                                                                                                                                                                                                                                                                                                   |
| Puncture Resistance                                                                         | ASTM E154 Standard Practice for Testing Load-Strain Properties of Roofing Membranes                                                                                                                                                                                                                                                                                                                       | Puncture Strength 636 N (143 lbf)<br>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)<br>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)<br>XMD – 273 N (61.3 lbf)                                                                                                                                                                                                                                                                                           |
| Low Temperature Flexibility<br>@ -45.6°C (-50°F)                                            | ASTM D5147 Standard Test Method for Tensile-Tear Strength of Bituminous Roofing Membranes                                                                                                                                                                                                                                                                                                                 | MD – PASS<br>XMD – PASS                                                                                                                                                                                                                                                                                                                   |
| Static Puncture Resistance                                                                  | ASTM D5602 Standard Test Method for Static Puncture Resistance of Roofing Membrane Specimens                                                                                                                                                                                                                                                                                                              | PASS Concrete 445 N (100 lbf)<br>PASS Insulfoam IX 222 N (50 lbf)                                                                                                                                                                                                                                                                         |
| <b>Water Vapor Transmittance</b>                                                            |                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                           |
| 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<br>Water Method<br>22.8°C (73°F) 50%RH                             | ASTM E96 Standard Test Methods for Water Vapor Transmission of Materials                                                                                                                                                                                                                                                                                                                                  | 30 Perm (grain/h•ft <sup>2</sup> •inchHg)<br>1716 ng/Pa•s•m <sup>2</sup>                                                                                                                                                                                                                                                                  |
| Water Vapor Transmission<br>Dynamic Relative Humidity<br>Measurement<br>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•ft <sup>2</sup> •inchHg)<br>1716 ng/Pa•s•m <sup>2</sup>                                                                                                                                                                                                                                                                  |
| <b>Adhesion Testing</b>                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                           |
| Lap Adhesion                                                                                | ASTM D1876 Standard Test Method for Peel Resistance of Adhesives (T-Peel Test)                                                                                                                                                                                                                                                                                                                            | 437 N/m (2.5 pli)                                                                                                                                                                                                                                                                                                                         |
| Delamination (Tear-drop)                                                                    | FM 4470, C.2 Single-Ply, Polymer-Modified Bitumen Sheet, Built-Up Roof (BUR) and Liquid Applied Roof Assemblies for use in Class 1 and Noncombustible Roof Deck Construction Appendix H Test Procedure for Small Scale QC and Physical Properties of Roof System Assemblies                                                                                                                               | Concrete - 24 N (5.4 lbf)<br>Plywood - 28 N (6.4 lbf)<br>Galvanized Steel - 59 N (13.2 lbf)<br>ACFoam II - 24 N (5.3 lbf)<br>ACFoam III - 32 N (7.3 lbf)<br>Insulfoam IX - 23 N (5.1 lbf)<br>Styrofoam™ High Load 60 - 41 N (9.3 lbf)<br>Dens Deck Prime Roof board - 24 N (5.5 lbf)<br>Securock® Gypsum-FiberRoof Board - 35 N (7.8 lbf) |
| Tensile Adhesion                                                                            | Testing Application Standard (TAS) No. 114-95, Test Procedures for Roof System Assemblies, in the High Velocity Hurricane Zone Jurisdiction                                                                                                                                                                                                                                                               | INSTA STICK™ - 2848 N (640.3 lbf)<br>OlyBond500™ - 2580 N (580 lbf)<br>Millennium One Step™ - 3821 N (858.9 lbf)<br>Millennium PG-1 Pump Grade - 4355 N (979 lbf)<br>CR-20 - 3354 N (754 lbf)                                                                                                                                             |
| Peel Adhesion                                                                               | ASTM D903 Standard Test Method for Peel or Stripping Strength of Adhesive Bonds                                                                                                                                                                                                                                                                                                                           | Concrete 438 N/m (2.5 pli)<br>Plywood 876 N/m (5.0 pli)<br>Galvanized steel 946 N/m (5.4 pli)                                                                                                                                                                                                                                             |
| <b>Air Resistance Testing</b>                                                               |                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                           |
| Air Permeance                                                                               | ASTM E2178 @75 Pa Standard Test Method for Air Permeance of Building Materials                                                                                                                                                                                                                                                                                                                            | 0.00086 cfm/ft <sup>2</sup> @ 1.57 psf (0.00437 L/s•m <sup>2</sup> @ 75 Pa)                                                                                                                                                                                                                                                               |

# PRODUCT DATA SHEET

SlopeShield Plus Self-Adhered Part No.: 29309000 / SlopeFlashing Part No.: 41308000 / 41303400

| TESTING DATA                    |                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                        |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PROPERTY                        | STANDARD                                                                                                                                                                                                                                                                                                  | RESULT                                                                                                                                                                                                                                                                 |
| 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<br>ASTM D7349 Standard Test Method for Determining the Capability of Roofing and Water-proofing Materials to Seal around Fasteners | PASS                                                                                                                                                                                                                                                                   |
| Fire Testing                    |                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                        |
| Flame Spread<br>Smoke Developed | ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials                                                                                                                                                                                                                   | Flame Spread 5<br>Smoke Developed 45                                                                                                                                                                                                                                   |
| Cone Calorimeter Testing Data   | ASTM E1354                                                                                                                                                                                                                                                                                                | Time to ignition: 23 sec<br>Flame Duration: 51 sec<br>Ave. Effective Heat of Combustion: 6.6 kJ/kg<br>Ave. HRR at 60 sec: 89 kW/m <sup>2</sup><br>Ave. HRR at 180 sec: 14<br>Peak HRR: 156 kW/m <sup>2</sup><br>Time of Peak: 49<br>Total HRR/A: 7.4 MJ/m <sup>2</sup> |