# BlockShield™ SA Plus

a self-adhered air and vapor barrier membrane
Roll Size: 60" Product No.: 37509299, Roof Half Roll Size 30" Product No.: 37509199,
Wall Half Roll Size 30" Product No.: 37503400

## Product Description

BlockShield SA Plus is a self-adhered, non-asphaltic, high temperature, air/vapor barrier membrane.

**BASIC USE**

BlockShield SA Plus can be installed on both roofs and walls in either commercial or residential construction.
**Roof Applications:** minimum slope of 1/4":12".

**MATERIALS**

BlockShield SA Plus consists of a proprietary polypropylene film with a very aggressive pressure-sensitive adhesive (PSA). The adhesive is protected by a siliconized release film, which is removed during installation.

**BENEFITS**

**Impermeable to air, water, and moisture vapor.**

**Ensures crew safety and a healthy building**, no VOC exposure, no Red List Chemicals, no primers, or protective gear required for installation.

**Durable, tear resistant, and flexible** at low temperatures.

**Compatible with many building sealants**: no adverse reaction with synthetic rubber, butyl, polyurethane, silicone and silane terminated hybrid sealants.

**All weather installation** membrane can be applied in virtually all weather conditions including below freezing 20°F (minus 6.6°C) and rising without the use of primer.

**Non-asphaltic** composition for improved health, safety and welfare for workers and occupants

**Roof to Wall Continuity** create a continuous air/vapor barrier by using BlockShield SA Plus on roofs, walls and rough openings for optimal energy savings.

**Wall Benefits:**

**12 month UV and weather exposure** makes membrane ideal for long-term projects.

**Roof Benefits:**

Simplified, **primer-free installation: Peel, Roll, Go**, saving ` valuable labor time

**High pressure wind uplift performance without the need for primer**, saving time, labor, and material cost

Designed to withstand **180 days of weather exposure,** minimizing delays, protecting your building

**Single-person roll lift**: easier jobsite handling and roof loading

**Slip resistant, UV stable, walkable,** and allows heavy machinery to be used on the surface.

## Compatible Substrates and Materials

**Roof Substrates**

- Gypsum/Fiber Roof Sheathing Boards
- Concrete (bull float finish or better)
- Plywood
- Pre-painted Steel
- Galvanized Metal
- Steel Deck
- Aluminum (Painted/Mill Finish)

**Roof Materials**

- Metal Roofing
- Cedar Shingles/Shakes
- Slate and Tile
- Single-ply
- Modified BItumen
- Asphalt Shingles

BlockShield SA Plus 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.

**Wall Substrates**

- Exterior Gypsum Sheathing
- Rigid Insulation
- OSB
- Concrete
- Brick
- Plywood
- Metal (Steel, Aluminum)
- Fiberglass and Vinyl Window and Door Frames

**Contact VaproShield Technical** – if you have additional substrate questions.

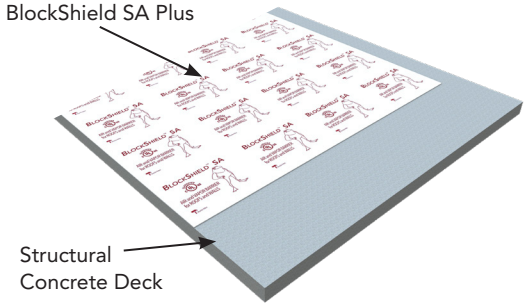
## Technical Data & Environmental

No Red List Chemicals. Contains 18-20% post industrial recycled content.

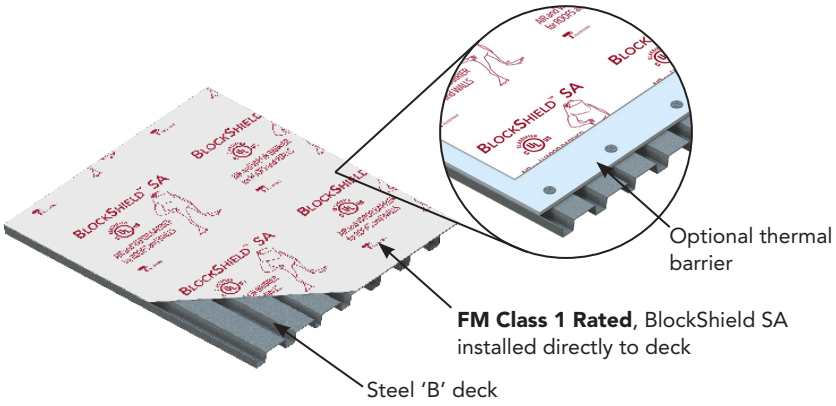
| PHYSICAL PROPERTIES | | |
|---|---|---|
| PROPERTY | RESULT | |
| Color | White | |
| Thickness | 10.2 mil (0.26 mm) | |
| Membrane Weight (without release film) | 0.95 oz/yd² (289 g/m²) | |
| Primer | No Primer Required (See Limitations section for more information) | |
| VOCs | None | |
| Field Exposure Before Roof/Cladding Materials | Roofs: 180 days | Walls: 365 days |
| Minimum Application Temperature | 20°F (-6.6°C) and rising | |
| Service Temperature | minus 40°F (-40°C) - 270°F (132.2°C) | |
| Warranty | 20 year material warranty | |

## Roof Applications: Low Slope

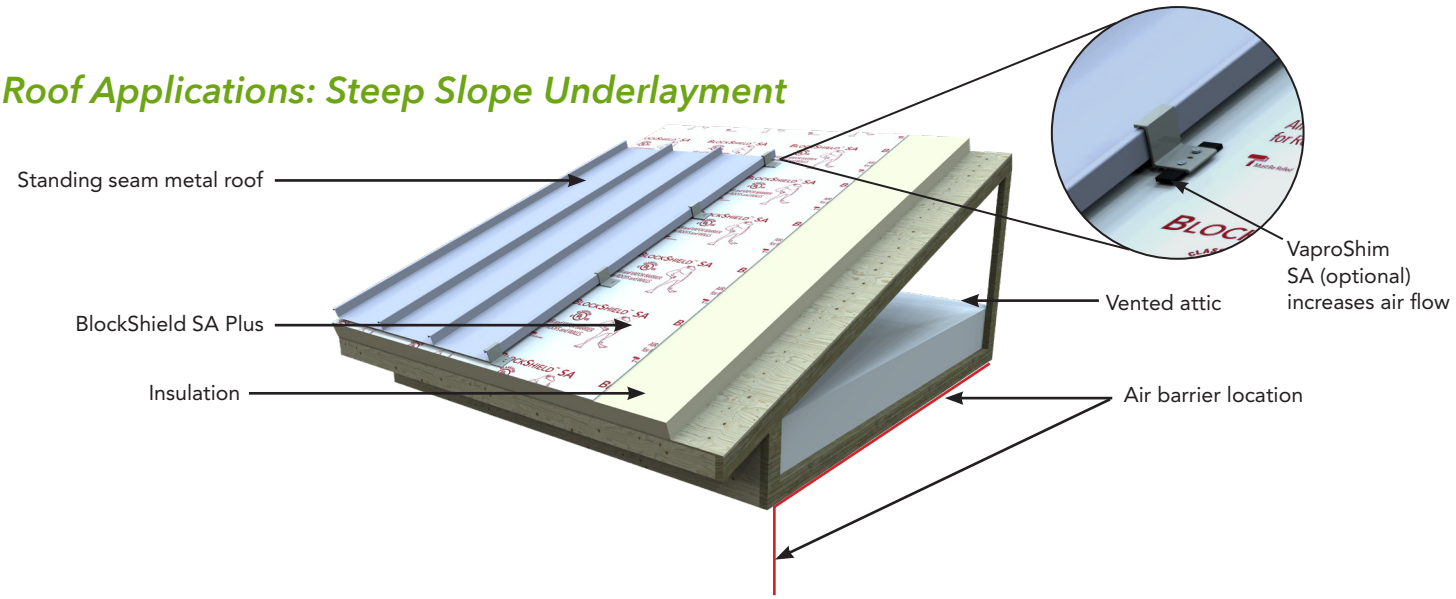
### Structural Concrete Roof Decks



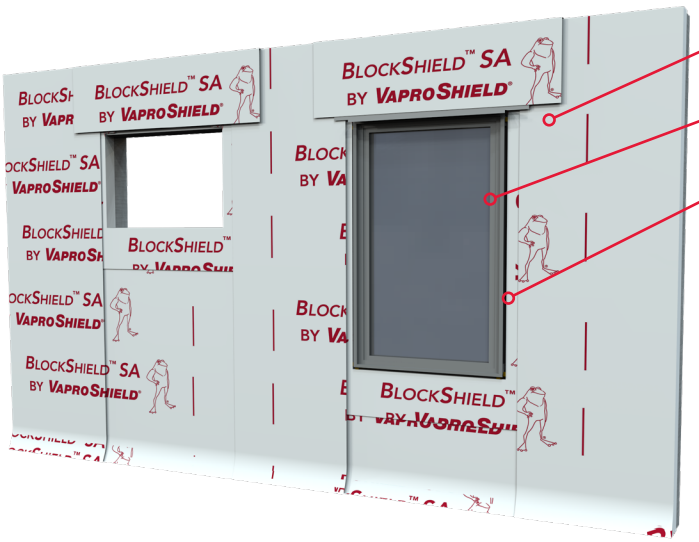

### BlockShield SA Plus Installed Directly To Steel Deck




## Roof Applications: Steep Slope Underlayment




## Wall Application: Air, Water and Vapor Barrier Flashing System




BlockShield SA properly shingled and applied directly to the sheathing

Window with sealant joint and backer rod (by others)

BlockFlashing properly shinged and applied directly to the sheathing

| BlockFlashing | | |
|---|---|---|
| Product | Part No. | Roll Sizes |
| BlockFlashing Roll  | 42505000 | 6 ½" x 100' (54 S/F) (.17m x 30.5m, 5 S/M) |
| | 42505500 | 11 ¾" x 100', 98 S/F (.3m x 30.5m, 9.1 S/M) |
| | 42507000 | 14 ¾" x 100', 123 S/F (.37m x 30.5m, 11.4 S/M) |

| PHYSICAL PROPERTIES | | |
|---|---|---|
| PROPERTY | RESULT | |
| 60" Roll Weight | 41 lbs (18.6 kg) *With box* | 39 lbs (17.7 kg) *Without box* |
| 30" Roll Weight | 21 lbs (9.5 kg) *With box* | 19 lbs (8.6 kg) *Without box* |
| Roll Dimensions | 60" x 100' (1.5 m x 30.5 m)<br>30" x 100' (.76 m x 30.5 m) | |
| Roll Coverage | 60" 500 ft² (46.5 m²) gross<br>30" 250 ft² (23.2 m²) gross | |

### RELATED LEED CREDITS

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

## 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.

### DETAILS

Visit www.VaproShield.com for complete installation instructions and details.

### SAFETY

**Roof 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.

### 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 BlockShield SA Plus. Fill voids and gaps in substrate greater than 7/8 inch (22.2 mm) in width to provide an even surface.

### BEST PRACTICE INSTALLATION

Install BlockShield SA Plus and related accessories according to manufacturer's separate written installation instructions. Visit www.VaproShield.com to view comprehensive installation instructions and videos.

**Roofs Best Practice**

All side and head laps must be a minimum of 3" (8 cm). After multiple runs of the product are installed, roll the entire section of installed membrane with a weighted roller, starting from the middle working outward, min. 70 lbs.

Shingled laps are required.

Ventilate as required per code.

**Walls Best Practice**

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.

Vertical seams should be staggered a minimum of 6" (15 cm), and should not occur directly above or below windows or doors.

Use a roller to activate pressure-sensitive adhesive.

### LIMITATIONS

Cold weather may affect the adhesion properties of the pressure sensitive adhesive. It is always recommended to conduct field adhesion testing separately or in conjunction with mock-up construction on the job site. Primers can improve adhesion to substrates. Contact VaproShield Technical for information on compatibility of primers commonly used for cold temperatures at (866)-731-7663.

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.

Do not contaminate BlockShield SA Plus 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 system. BlockShield SA Plus is not compatible with coal tar pitch.

**Roofs**

BlockShield SA Plus should be covered within 180 days of installation with permanent roofing material.

**Walls**

BlockShield SA Plus should be covered within 365 days with permanent wall cladding material.

## Availability

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

## Warranty

A 20-year material warranty is available.

## TESTING DATA

| PROPERTY | STANDARD | RESULT |
|---|---|---|
| **Performance** | | |
| Elongation | ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic | MD - 409% |
| Tensile Strength | ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension | MD - 16.96 MPa (2460 psi)<br>XMD - 11.87 MPa (1721 psi) |
| Dry Tensile Strength | ASTM D882 Standard Test Method for Tensile Properties of Thin Plastic Sheeting | MD - 3.85 N/mm (22 lbf/in)<br>XMD - 3.85 N/mm (22 lbf/in) |
| Elongation at Break | ASTM D882 Standard Test Method for Tensile Properties of Thin Plastic Sheeting | MD - 541%<br>XMD - 617% |
| 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 - 338 N (76 lbf)<br>XMD - 356 N (80 lbf) |
| Elongation at Break | ASTM D5034 Standard Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test) | MD - 120%<br>XMD - 157% |
| Minimum 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 | Deflection 5.84 cm (2.3")<br>Max Load 249 N (56 lbf) |
| Cold Mandrel Bend Test | AC38 Section 3.3.4 | PASS |
| Weathering Tests | AC38 Section 4.1.2 UV Exposure | PASS |
| Wear Resistance | Wheelbarrow Testing | PASS |
| Self Adhering Flashing | AAMA 711-13 Voluntary Specification for Self Adhering Flashing Used for Installation of Exterior Wall Fenestration Products | Compliant |
| **Water Vapor Transmittance** | | |
| Water Vapor Transmission Desiccant Method Procedure A 23°C (73.4°F) 0-50 %RH | ASTM E96 Standard Test Methods for Water Vapor Transmission of Materials | 0.0173 Perm (grain/h•ft²•inchHg) @23°C 100%RH<br>0.992 ng/Pa•s•m² |
| Water Vapor Transmission Using Modulated Infrared Sensor | ASTM F1249 Standard Test Method for Water Vapor Transmission Rate Through Plastic Film and Sheeting Using a Modulated Infrared Sensor | 0.0193 Perm (grain/h•ft²•inchHg)<br>1.10 ng/Pa•s•m² (23°C 0-50 %RH) |
| Water Ponding | ICC-ES AC48 Acceptance Criteria for Self-Adhered Roof Underlayments for use as IBarriers | PASS |
| **Air Resistance Testing** | | |
| Air Permeance | ASTM E2178 @75 Pa Standard Test Method for Air Permeance of Building Materials | 0.00912 L/s•m² @ 75 Pa (0.0018 cfm/ft² @ 1.57 psf) |
| Air Permeance | CAN/ULC-S741-08 (2020) Standard for Air Barrier Materials | PASS |
| Air Leakage Rate | CAN/ULC-S742-11 Standard for Air Barrier Assemblies | Class A1 |
| **Water Resistance Testing** | | |
| Nail Sealability | ASTM D1970 Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection Section 7.9 referring to ASTM D7349 protocol 4 with modifications | PASS |
| Water Resistance (Control after Weathering) | AATCC 127 Hydrostatic pressure test (550 mm water column for 5 hours), American Association of Textile Chemists and Colorists | PASS |
| **Fire Testing** | | |
| Flame Spread<br>Smoke Developed | ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials | Class A<br>Flame Spread 5<br>Smoke Developed 15 |
| UL | UL790 Test Method of Fire Tests for Roof Coverings, CAN/ULC-S107 | PASS |
| Surface Burning Characteristics | CAN/ULC-S102 Protective Underlayment, Permeable to Allow Drying, Provides an Air Barrier | Flame Spread Rating: 5<br>Smoke Developed Value: 15 |

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

FM APPROVED

NEMO | cert.® CERTIFIED

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)