



**1. Product Name**

**VaproShield WrapShield HS Water-Resistive Vapor-Permeable Air Barrier Sheet with Drainage Matrix**

**2. Manufacturer**

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**3. Product Description**

**BASIC USE AND APPLICATIONS**

WrapShield HS drainage matrix and air barrier is a combination of WrapShield, a water resistant, breathable air barrier, and Home Slicker, a three dimensional, cavity-creating matrix in a one installation product. Wrap Shield HS is designed as concealed or semi-concealed underlayment behind wall cladding systems, including siding and shingles, metal and composite panels, EIFS, stucco, and masonry veneers.

WrapShield HS triple layer vapor permeable, air barrier is designed specifically to resist cold air penetration, and allow trapped water vapor to escape to the outside. The cavity forming matrix is especially useful in rain screen designs. It may be used behind open joint rain screen cladding such as Trespa Meteon, Parklex, and Prodema Lignum.

**BENEFITS**

WrapShield HS is a single installation product that provides a water resistant breathable air barrier and a three dimension matrix that forms a rain screen cavity. WrapShield reduces building heating and cooling loads. WrapShield HS has excellent drying capacity by allowing trapped interior moisture to escape, reducing the risk of mold, mildew, and rot.

WrapShield HS is tear-resistant, moisture tolerant, and can sustain up to 9 months of UV and climate exposure during construction. WrapShield HS is 100

percent recyclable and contributes to designs seeking LEED certification.

**MATERIAL**

WrapShield HS is a triple-layered heat-bonded polypropylene fabric sheet consisting of front and back carrier sheets with a middle layer of spun-bonded polypropylene fabric engineered as an air barrier that resists liquid water molecule penetration while allowing smaller trapped water vapor molecules to escape to the exterior. Home Slicker is a rolled product bonded to the WrapShield that creates the necessary airspace for a rain screen wall system

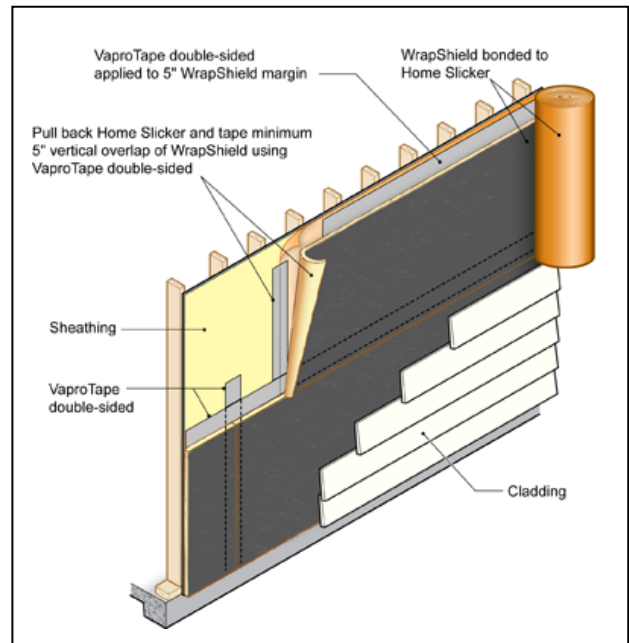
**ACCESSORIES**

**Sill Pan:** VaproSillSaver recycled vinyl sill pan with preformed corner dams and window unit spacers provides continuous protection to flashed window sills as part of a total wall water-resistive system.

**Flashing Tapes:** The complete WrapShield HS installation includes self-adhering single- and double-sided adhesive flashing, lap, and transition tapes, with UV white, aluminum metallic, polymer alloy, and woven fabric composition.

**SIZES**

WrapShield HS is supplied in rolls measuring 44 inches by 77 feet (1118 mm by 23.5 m), while the Home Slicker matrix has a dimension of approximately 39 inches (991 mm) to allow a 4-inch (102 mm) margin for lapping.



## 4. Technical Data

### REFERENCED STANDARDS

American Association of Textile Chemists and Colorists

- AATCC 127 Test Method for Water Resistance: Hydrostatic Pressure Test

ASTM International

- ASTM D 882 Test Method for Tensile Properties of Thin Plastic Sheeting
- ASTM E 96/E 96M Test Methods for Water Vapor Transmission of Materials
- ASTM E 283 - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen
- ASTM E 2178 - Standard Test Method for Air Permeance of Building Materials.

### APPROVALS

International Code Council Evaluation Service, Inc.

- ICC-Certificate ESR-1916 - Acceptance Criteria for Water-Resistive Barriers

### PHYSICAL/CHEMICAL PROPERTIES

- Water Vapor Permeance, ASTM E 96 Method B: 50 perms (2875 ng/(Pa\*s\*m<sup>2</sup>))
- Water Resistance, AATCC 127, 550 mm hydrostatic head for 5 hours: No leakage
- Tensile Strength, ASTM D 882: 44.8 lbf/inch (78 N/mm), machine direction; 25 lbf/inch (43.8 N/mm), cross-machine direction
- Allowable UV Exposure Time: 270 days
- Sheet Thickness: 0.020 inches (0.51 mm)
- Weight: 5 oz per sq. yd. (17 g/sq. m)
- Matrix Thickness: 0.26 inch (6.6 mm)

### SUSTAINABLE DESIGN BENEFITS

- Proper moisture management in wall assembly design is crucial to limiting mold propagation and ensuring indoor environmental quality for occupants. WrapShield HS has high drying capacity allowing walls to breathe rather than trap moisture that may cause mold propagation.
- Air barriers reduce air infiltration into wall assemblies and building interiors, reducing heating and cooling loads with resultant energy savings.
- Early installation of a water-resistive air barrier protects hygroscopic materials such as wood and gypsum board from exposure to water infiltration during construction, reducing propagation of mold spores.

- Polypropylene is commonly recycled, and has the number "5" as its resin identification code.
- WrapShield HS is free of urea-formaldehyde constituents.

### RELATED LEED CREDITS

- IEQ Credit 3.1: Construction Indoor Air Quality Management Plan-During Construction
- EA Credit 1: Optimize Energy Performance

## 5. Installation

### STORAGE AND HANDLING

Store and handle products according to manufacturer's written recommendations. Store rolled goods upright or on level surface protected from weather and damage.

### PREPARATION

Examine substrates to determine suitability for installation according to manufacturer's recommendations. Verify location of framing and blocking members to accept fasteners or adhesives.

### INSTALLATION

Install WrapShield HS and related accessories according to separate written manufacturer installation instructions. Lap vertical seams minimum 6 inches (230 mm). Lap horizontal seams minimum 6 inches (150 mm). Seal lapped seams with recommended lap tape. Proper installation will provide a complete, water-resistive air barrier ready to receive installation of cladding.

#### Window Openings and Sill

Secure prefabricated sill pan and water-resistive barrier corners at sill of opening. Install lap strip of air barrier across sill, leaving bottom of lap strip free to overlap barrier sheet. Install lap strip around jambs, extending along wall surface a minimum of 9 inches (230 mm). Secure prefabricated water-resistive barrier corners at head of opening. Install lap strip across head of opening, extending horizontally beyond corners minimum of 6 inches (150 mm). At window units equipped with nail flanges, cut water-resistive barrier along leading edge of header 2 inches (50 mm) beyond jamb to allow insertion of window nailing flange behind air barrier.

#### Door Openings

Install lap strip around jambs, extending along wall surface a minimum of 9 inches (230 mm). Secure prefabricated air barrier corners at head of opening. Install lap strip across head of opening, extending horizontally beyond corners minimum of 6 inches (150 mm). Cut air barrier along leading edge of header 2 inches (50 mm) beyond jamb to allow insertion of door nailing flange behind water-resistive barrier.

### Penetrations

Install manufactured penetration sleeves sized for penetration and installed as recommended by sleeve manufacturer. Prepare air barrier skirt with minimum 12 inches (300 mm) of fabric on all sides at counter-flashed penetrations. Make multiple cuts to form a star-shaped opening in fabric and place over penetration. Extend skirt fabric along penetrating item and seal to penetrating item with single-sided tape.

### Sheet Installation

Begin air barrier sheet installation at bottom of wall, mechanically fastening sheet at bottom and top at 24 inches (600 mm) o.c. Seal bottom edge of sheet to substrate in continuous bead of non-skinning butyl sealant or butyl tape.

Seal air barrier sheet to overlapped lap strips and penetration skirts with double-sided lap tape. Overlap at vertical laps minimum of 6 inches (150 mm) with taped joints or 12 inches (300 mm) without tape. Overlap at horizontal laps minimum of 6 inches (150 mm). Insert sheet under bottom edge of lap strips and penetration skirts; do not tape bottom edge of skirts and lap strips. Extend sheet 6 inches (150 mm) over corners.

Shingle subsequent courses of water-resistive air barrier sheet, maintaining minimum 6 inch (150 mm) horizontal and 12 inch (300 mm) vertical laps. Do not place vertical laps above openings. Use additional capped fasteners in field of sheet if air barrier will be left exposed prior to installation of cladding.

### PROTECTION

Protect installed air barrier from damage due to construction activities, high wind conditions, and extended exposure to weather.

Inspect exposed air barrier prior to installation of cladding. Remove and replace air barrier materials that have been damaged. Patch damaged areas as recommended by manufacturer.

## 6. Availability

VaproShield products are available from qualified representatives throughout the US; contact VaproShield for local contact information.

## 7. Warranty

VaproShield will provide replacement water-resistive air barrier materials if original material, handled and installed in accordance with manufacturer's instructions, fails due to material defects within 20 years of purchase; this material warranty does not include labor for installation. Details of warranty terms and conditions are available from VaproShield.

## 8. Maintenance

WrapShield HS is concealed by wall cladding following installation and requires no maintenance. WrapShield HS should not be subjected to chemicals, surfactants, or cleaning compounds that could affect the water resistance of the fabric surface; if exposed, replace affected fabric.

## 9. Technical Services

Detailed information including product literature, test reports, installation instructions, and information on special applications is available through VaproShield.

## 10. Available Resources

- Section 07 27 00 AIR BARRIERS guide specification for WrapShield HS in CSI 3-part format is available from VaproShield
- ICC-ES Report and related independent test reports are available from VaproShield