



**1. Product Name**

**VaproShield WrapShield Water-Resistive Vapor-Permeable Air Barrier Sheet**

**2. Manufacturer**

VaproShield, LLC.  
 915 26th Avenue, NW  
 Gig Harbor, WA 98335  
 Phone: (866) 731-7663  
 Phone: (253) 851-8286  
 Fax: (253) 858-3297  
 Email: [info@vaproshield.com](mailto:info@vaproshield.com)  
 Web: [www.vaproshield.com](http://www.vaproshield.com)

**3. Product Description**

**BASIC USE AND APPLICATIONS**

Wrap Shield is designed as concealed or semi-concealed air and water barrier and underlayment behind wall cladding systems, including siding and shingles, metal and composite panels, EIFS, stucco, and masonry veneers.

WrapShield triple layer vapor permeable, water-resistive air barrier is designed specifically to resist air penetration and allow trapped water vapor to evaporate to the exterior. 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 provides a water resistant breathable air barrier that reduces building heating and cooling loads. WrapShield's excellent drying capacity allows trapped interior moisture to escape, reducing the risk of mold, mildew, and rot. This highly breathable water-resistive air barrier sheds water protecting vulnerable substrates in applications where other less permeable membranes might result in trapped moisture. WrapShield membrane self cinches around fasteners to prevent water penetration.

WrapShield is tear-resistant, moisture tolerant, and can sustain up to 9 months of UV and climate exposure during construction. WrapShield is 100 percent recyclable and contributes to designs seeking LEED certification.

**MATERIAL**

WrapShield 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. Black WrapShield has added UV resistance for use in semi-exposed conditions for open-joint rain screen applications.

**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.

**Cladding Battens with Venting Starter and Top Strips:** These recycled vinyl accessories installed over WrapShield provide a ventilated space behind the wall cladding.

**Flashing Tapes:** The complete WrapShield 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.

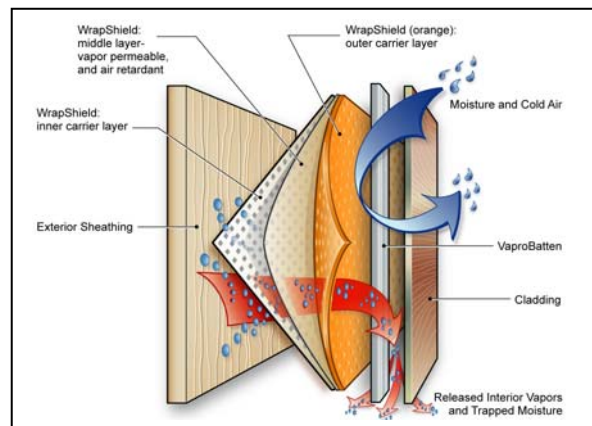
**SIZES**

WrapShield is supplied in rolls measuring 59 inches by 164 feet (1500 mm by 50 m).

**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 84 Test Method for Surface Burning Characteristics of Building Materials
- 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

- Surface Burning Characteristics, ASTM E 84: Flame-spread index, 5; Smoke-developed index, 70
- Water Vapor Permeance, ASTM E 96 Method B: 50 perms (11500 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: 28.2 lbf/inch (49.4 N/mm), machine direction; 22.6 lbf/inch (39.6 N/mm), cross-machine direction
- Allowable UV Exposure Time: 270 days
- Thickness: 0.020 inches (0.51 mm)
- Weight: 5 oz per sq. yd. (17 g/sq. m)

SUSTAINABLE DESIGN BENEFITS

- Proper moisture management in wall assembly design is crucial to limiting mold propagation and ensuring indoor environmental quality for occupants. WrapShield's high vapor permeance allows 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 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 and related accessories according to separate written manufacturer installation instructions. Lap vertical seams minimum 9 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 water-resistive 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 water-resistive barrier.

Door Openings

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). Cut water-resistive 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 water-resistive 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 water-resistive 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 water-resistive 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 water-resistive air barrier will be left exposed prior to installation of cladding.

### Sheet Installation at Spaced Rainscreen Installation

Use WallShield UV-resistant black water-resistive barrier material at open joints in spaced rainscreen cladding systems.

### Cladding Battens

Install horizontal starter strip at base of cladding installation over top of installed water-resistive air barrier. Install top vent strip along top of cladding installation. Install batten strips vertically spaced according to cladding fastening requirements, coordinated with fastening requirements to underlying structure. Use fasteners recommended by manufacturer for application.

### PROTECTION

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

Inspect exposed water-resistive air barrier prior to installation of cladding. Remove water-resistive air barrier materials that have been damaged and replace. 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 date of purchase; this material warranty does not include labor for installation. Details of warranty terms and conditions are available from VaproShield.

## 8. Maintenance

WrapShield is concealed by wall cladding following installation and requires no maintenance. WrapShield 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 in CSI 3-part format is available from VaproShield
- ICC-ES Report and related independent test reports are available from VaproShield