



Premium Building Products  
That Protect

## 1. Product Name

Protecto Sill Drainage System

Primers & System Components

- BT Primer and Protecto-Tak Spray Adhesive
- Protecto Sealant 25XL
- PSDS Detail Tape
- BT25XL Building Tape
- Protecto Flex Flashing Tape
- Dri-Shield™ Housewrap
- Dri-Shield™ Sealing Tape

## 2. Manufacturer

Protecto Wrap Co.  
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## 3. Product Description

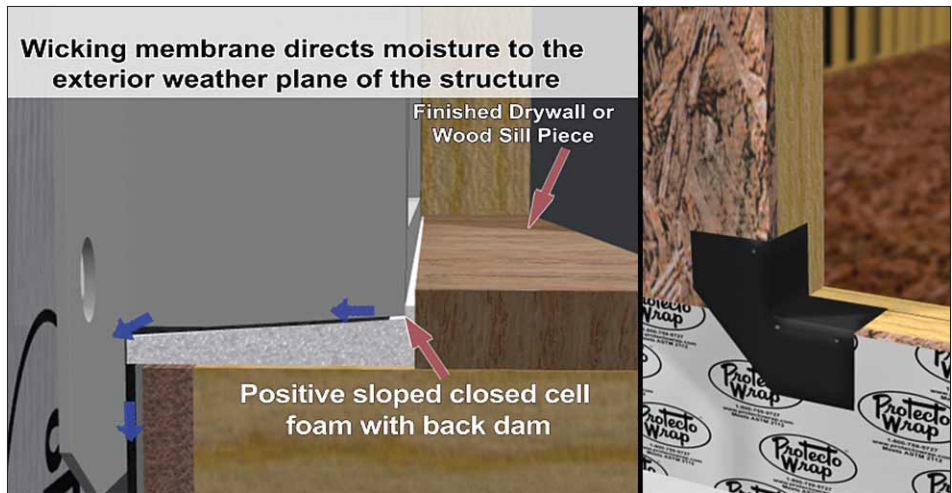
### BASIC USE

The Protecto Sill Drainage System (PSDS) is a patent-pending window sill drainage system that protects the window opening from black mold and moisture damage. Ideal for new and remodeling construction, this unique product combines Protecto Wrap's advanced peel-and-stick adhesive with positive-sloped, closed-cell foam that ensures any water or condensation found inside the window opening will egress to the outside weather plane of the structure.

The PSDS will accommodate 2" x 4" or 2" x 6" (51 x 102 or 51 x 152 mm) construction for wood, vinyl and aluminum windows. The system meets ASTM E2112 requirements for flexible sill pan flashings, and it is the only sill pan flashing system that transfers moisture to the outside weather plane of the building structure through a continuously sealed nail fin, per window manufacturer's specifications.

### BENEFITS

- Helps prevent moisture infiltration through the window opening
- Protects the window sill and structural framing from rot and black mold
- Helps prevent wood sill and drywall damage



Vinyl finned window with PSDS corner detail

- due to moisture infiltration
- Transfers the moisture that enters the window opening to the outside weather plane, even if the sill is flat or slightly canted in
- Forms a waterproof barrier under wood, vinyl and aluminum windows
- The compressible closed cell foam will not absorb water and is mold and mildew resistant
- Helps eliminate costly call backs due to window leaks
- Helps protect and reduce window manufacturers' and builders' liability
- Comes with Protecto Wrap's 15 year system limited warranty
- Can be custom fitted and cut to accommodate any window opening
- Works on new or retrofit window installations
- Installs quickly and easily

### PACKAGING

- PSDS is available in 50' (15.2 m) rolls
- Protecto Sealant 25XL is white and is packaged in 10.1 oz (0.3 L) cartridges (24 per case)
- Dri-Shield Housewrap is 5 mil thick and is available in 9' x 150' (2.7 x 45.7 m) rolls

### COMPOSITION & MATERIALS

The beveled, closed cell foam of the Protecto Sill Drainage System is 1 3/4" (45 mm) wide and is designed with a 1/2" (12.7 mm) tall back dam to help promote additional drainage and protection. An advanced mold resistant, felt-like wicking material is available in 4", 6" and 8" (102, 152 and 203 mm) widths. It is applied over Protecto Wrap's BT25XL membrane and absorbs and transfers the moisture to the outside of the window opening, leaving the window cavity dry, which helps prevent black mold.

A silicone-coated release film on the bottom of the patent-pending PSDS can be fully removed or temporarily left in place under the front flap to allow proper integration with the weather resistive barrier (per ASTM E2112).

### PRIMERS & SYSTEM COMPONENTS

- BT-Primer and Protecto-Tak Spray Adhesive are high tack primers for use over Dens-Glass Gold®, OSB, metal, wood, dry concrete and dry masonry. BT-Primer is moisture tolerant and is suitable for use on moist or damp Dens-Glass Gold. BT-Primer is VOC compliant
- Protecto Sealant 25XL is a one-component, moisture cure, high performance polyurethane sealant used for the installation of windows and doors. It has excellent adhesion to window and building substrates and is VOC compliant
- PSDS Detail Tape is a 60 mil (1.5 mm) unreinforced conformable sheet used for detailing at the inside corners
- BT25XL building tape is a 25 mil (0.64 mm), tough-faced, self-adhering air/vapor barrier and waterproofing membrane that seals window perimeters to building substrates to create an impenetrable barrier
- Protecto Flex is a 60 mil (1.5 mm) thick self-adhering flashing tape. The flexible cross-laminated top surface will expand and conform to irregular or curved surfaces, while the aggressive adhesive adheres to form a permanent bond between the window fin and the building substrate. Protecto Flex provides a complete air and water seal, and it eliminates the need to cut and patch the membrane to conform to door and window openings

- Dri-Shield™ Housewrap is a perforated polyolefin membrane that is installed beneath exterior siding to reduce air infiltration
- Dri-Shield™ Sealing Tape is used for sealing Dri-Shield Housewrap around window openings and for repairing tears

**LIMITATIONS**

Do not use solvent based caulks in conjunction with Protecto Wrap products.

**4. Technical Data**

**APPLICABLE STANDARDS**

ASTM International

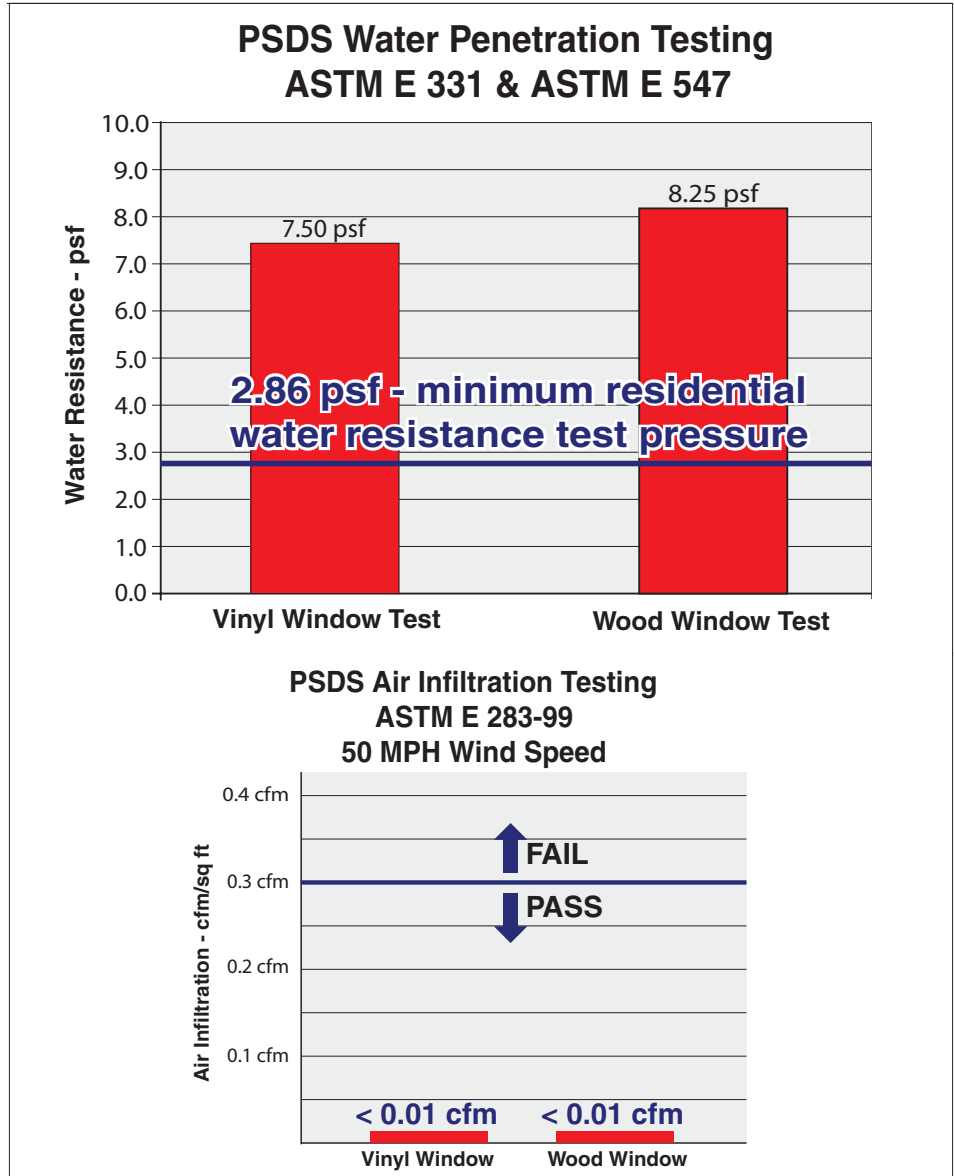
- ASTM D779 Standard Test Method for Water Resistance of Paper, Paperboard, and Other Sheet Materials by the Dry Indicator Method
- ASTM D822 Standard Practice for Filtered Open-Flame Carbon-Arc Exposures of Paint and Related Coatings
- ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials
- ASTM E96/E96M Standard Test Methods for Water Vapor Transmission of Materials
- ASTM E283 Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen
- ASTM E331 Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference
- ASTM E547 Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference
- ASTM E2112 Standard Practice for Installation of Exterior Windows, Doors and Skylights

American National Standards Institute (ANSI) ANSI/AAMA/NWDA 101/I.S.2 Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors

Technical Association of the Pulp and Paper Industry (TAPPI) T 460 Air Resistance of Paper (Gurley Method)

**APPROVALS**

Consult manufacturer for current information on approvals by code bodies and other industry entities.



**PHYSICAL PROPERTIES**

See tables on page 2 and 3 for performance test results.

**5. Installation**

**STORAGE & HANDLING**

Store all material inside in a dry space at temperatures between 50 and 90 degrees F (10 and 32 degrees C). Do not store in direct sunlight. Do not remove material from box until ready to use.

For cold weather applications, store product in a heated airspace at a temperature of 50 degrees F (10 degrees C) or higher for at least 2 days prior to application. Remove only the material that can be applied within 2 hours.

**PREPARATORY WORK**

Handle and store product according to manufacturer's recommendations.

Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact. Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.

Verify that site conditions are acceptable for installation. Do not proceed with installation until unacceptable conditions are corrected.

**APPLICATION**

Install Protecto Wrap Dri-Shield Housewrap on the exterior side of the exterior wall with the printed side facing outward. With a sharp utility knife, cut the Dri-Shield Housewrap even with the rough opening at the sill and header. Trim the Dri-Shield back 1" (25.4 mm) at side jambs of the rough opening.

Next, make 2 diagonal cuts extending from the top corners of the rough opening. These cut lengths should be slightly greater than the width of the 9" (229 mm) flashing material.

Finally, make 2 cuts extending out horizontally along the bottom corners of the rough opening. These cut lengths should be slightly greater than the width of the 9" (229 mm) flashing material. Fold back the sides and top of the Dri-Shield and temporarily tape back material to fully expose the substrates.

Ensure the sill is level before installation. Cut the 9" (229 mm) wide BT25XL sill flashing 18" (457 mm) longer than the width of the rough opening. Remove the release liner and apply even with the sill edge directly to the Dri-Shield Housewrap.

Determine the depth of the window from the nail flange to the inside edge of the window profile. Add 1/2" (12.7 mm) and transfer this measurement to the sill top by drawing a line for proper placement of PSDS.

Apply PSDS Detail Tape to the bottom corners by removing the release paper from the back, folding 90 degrees and positioning the tape into the corner to the line marked for proper PSDS placement. Press into corner and then remove the release film from the top side to allow the tape to be folded out over the corner and onto the BT25XL.

Apply a 3/8" (9.5 mm) bead of Protecto Sealant 25XL in each corner of the rough opening. Measure and cut the PSDS 1/4" (6.4 mm) wider than the width of the rough opening at the sill. Remove release liner and apply the PSDS to the top of the sill at the predetermined depth marked on the sill top.

Tool in sealant to fill all corner voids, but do not cover the wicking materials with sealant. The wicking membrane directs moisture to the exterior weather plane of the structure.

Apply a continuous 3/8" (9.5 mm) bead of Protecto Sealant 25XL to the back of the nail fin and install the window per the manufacturer's instructions.

Ensure that the back dam of the PSDS is located directly behind the inside edge of the window and that the bottom of the window is

**AAMA 101/97 - Minimum Product Performance Requirements**

Window and Door Classes	Design Pressure	Structural Test Pressure	Water Resistance Test Pressure
Residential	15 psf	22.5 psf	2.86 psf
Light Commercial	25 psf	37.5 psf	3.75 psf
Commercial	30 psf	45.0 psf	4.50 psf
Heavy Commercial	40 psf	60.0 psf	6.00 psf

in direct contact with the PSDS.

If increased adhesion is needed, apply Protecto-Tak spray adhesive at both jambs and across the top of the rough opening. Install the 9" (229 mm) wide BT25XL flashing over the nail fin and directly to the exterior substrate at both jambs of the window and over the BT25XL at the sill level.

Then install the 9" (229 mm) wide BT25XL flashing over the nail fin and directly to the exterior substrate at the head of the window, extending out at least 1" (25.4 mm) over the jamb flashing.

Note - For radius or curved windows, use Protecto Flex Flashing Tape at the head of the window.

**Testing:**

PROPERTY	TEST METHOD	DRI-SHIELD™
TENSILE STRENGTH	ASTM-D 822-97	MD 50 (lbs/in) CD 46
AIR POROSITY (Gurley)	TAPPI T-460-96	Side A-B 9.4 (sec/100cc) Side B-A 9.1
WATER RESISTANCE	ASTM D-799-94	Side A-B 2:47:30 (hh:mm:ss) Side B-A 1:52:42
WATER VAPOR PERMEANCE	ASTM E-96-A	7.5 Perms (average)
CANADIAN WATER PONDING	CCMC 07193	Pass
PLIABILITY	SBCCI	Pass
FLAME SPREAD*	ASTM E-84-97	14 (Class A)
SMOKE DEVELOPED*	ASTM E-84-97	1 (Class A)

**Meets all building codes including the new International Building NES NER #655**

The above rate of Flame Spread/Smoke Developed falls into Class A. Interior Wall and Ceiling Finish category. These numerical results, however, are not intended to reflect hazards presented by this under actual fire conditions.

Protecto Wrap Company believes the information and recommendation herein to be accurate and reliable. All numbers are derived from data obtained under controlled test conditions. No warranty, expressed or implied, is given as to characteristics, properties or performance under any variations from such conditions in actual construction.



Fold the Dri-Shield Housewrap back over the top of the BT25XL flashing and tape all cut seams with Dri-Shield sealing tape in a shingling fashion.

#### PRECAUTIONS

- BT-Primer or Protecto-Tak Spray Adhesive must be used in applications with temperatures below 45 degrees F (7 degrees C)
- BT-Primer or Protecto-Tak Spray Adhesive must be used on weathered surfaces, masonry, concrete, Dens-Glass Gold® and OSB surfaces
- Avoid getting overspray on finished surfaces
- Protecto Flex must be stored in a location with temperatures above 50 degrees F (10 degrees C)
- Protecto Wrap solvent-based primers/mastic are flammable. Avoid exposure to open flames, sparks, etc. Use only in areas with adequate ventilation. Refer to MSDS for additional information and warnings
- Dri-Shield Housewrap must not be used directly with cedar siding. A cedar breather must be installed to ensure proper airflow

## 6. Availability & Cost

#### AVAILABILITY

The PSDS is manufactured in Denver, CO, and is available worldwide through a network of Protecto Wrap distributors. For detailed product information or to find a local representative or distributor, contact the Protecto Wrap Co.

#### COST

The PSDS is competitively priced. Contact a local representative or the corporate office for information.

## 7. Warranty

Protecto Wrap Co. expressly warrants, subject to the Exclusion Of Warranties provision, that the PSDS system products shall be fit for the ordinary purposes for which such products are intended for a period of 15 years. Contact the manufacturer for complete warranty details.

## 8. Maintenance

None required. If installed in accordance with manufacturer's recommendations, PSDS should last the life of the structure.

## 9. Technical Services

Complete technical assistance and information are available from Protecto Wrap field representatives and distributors or by contacting the manufacturer.

## 10. Filing Systems

- MANU-SPEC®
- Additional product information is available from the manufacturer.