

# CERTIFICATE OF CONFORMANCE

## Polar Wall<sup>®</sup> Plus Vinyl Siding

### SPECIFICATIONS:

Polar Wall Plus

- Polystyrene backing meets or exceeds all the requirements of SPI specifications ASTM C-578-87A (type 1)

### LONG TERM THERMAL PERFORMANCE:

The system "R"-Value for Polar Wall Plus was determined by ASTM C-236 "Guarded Hot Box" method. Polar Wall Plus products demonstrate no thermal drift with age. "R"-Values vary by profile as follows:

- |                |      |
|----------------|------|
| • D/4          | 2.34 |
| • D/5 Dutchlap | 2.42 |
| • D/6          | 2.48 |

### DESIGN WINDLOAD

Polar Wall Plus has been tested for windload resistance based on ASTM D3679-09, ASCE 7-02, 30 ft. high, Exposure B to the following:

- Static Windload Test Pressure 85 psf
- Design Windload = 183mph\*

All Norandex siding has been tested per ASTM D 5206 for resistance to negative wind load pressures when installed with nails positioned 16" on center.

### WARRANTY:

- The structural lamination integrity & thermal performance of Polar Wall Plus is guaranteed for twenty (20) years.
- Vinyl Siding component carries a Lifetime Warranty against manufacturing defects.
- Limited Lifetime Fade Warranty to a color change of 3 standard color units.

### FIRE RESISTANCE (for vinyl siding only, not foam)

All siding, soffit and accessories distributed through Norandex have a Class 1 flame spread classification per 1997 Uniform Fire Code.

#### ASTM E84:

Flame Spread Index ≤20  
Smoke Developed Index >450  
Fuel Contribution 0

#### ASTM D1929:

Self-Ignition temperature 780°F

### RELEVANT CODES AND REGULATIONS COMPLIANCE:

ASTM D-7445, ASTM D-6864,  
2007 Florida Building Code FL# 12500  
Vinyl Siding only: ASTM D-3679, UBC 14-2, TDI EC-43

### PHYSICAL DATA:

Polystyrene Thickness (Nominal)

- D/4 – 1-1/8"
- D/5 Dutchlap – 1-1/8"
- D/6 – 1-1/4" (Not available in Russet)

Vinyl Siding Thickness

- .046" (+/- .001")

### SAFE TO USE:

Polar Wall Plus products are environmentally friendly & fully recyclable. They are constructed from inert organic materials and contain no CFC's HCFC's or Formaldehyde.

### THERMAL EXPANSION:

Polystyrene is very compatible with vinyl siding due to their nearly identical coefficients of expansion & contraction. Polystyrene coefficient of thermal expansion is .000035 in./in./degree F. Vinyl siding will range from .000031 to .000036 in./in./degree F.

### POLYSTYRENE SPECIFICATIONS:

- Density: Nominal 1.0 pound per cubic foot. (Test method ASTM C-303)
- Flammability: Polar Wall Plus is fabricated using modified expandable polystyrene, treated with a fire retardant chemical, and will not support combustion. Although "Modified EPS" contains a flame-retardant agent, it is an organic material and should therefore be considered flammable if exposed to an open flame or ignition source.
- Water Permeability: Not less than 5.0 perm/inch maximum (Test method ASTM E-96).
- Polystyrene breathes and is not a vapor barrier. <http://nx.stonegatelogistics.com/>
- Water Absorption: Less than 4.0% by volume. (Test method ASTM C-272)
- Capillarity: None

### 20 COLORS:

White, Champagne, Cream, Silver, Tan, Almond, Dune, Linen, Hazel\*, Ivy\*, Tumbleweed\*, Cobblestone\*, Saddle\*, Granite\*, Wedgewood\*, Russet\*\*, Khaki\*, Mocha\*, Smoke\*, Olive\*  
\* Premium colors featuring ColorHold<sup>®</sup> capping resins, a UV-Stable acrylic polymer.  
\*\* Designer Collection Color

### SOUND TRANSMISSION CLASS RATING – 37\*

\* The STC (Sound Transmission Class) rating was calculated in accordance with ASTM E 413 *Classification for Rating Sound Insulation*.

Construction: The test wall was constructed of 2" X 4" wood studs spaced 16" on center. One layer of 1/2" Type X gypsum wallboard fastened to the interior side of the wall system. The stud cavities were insulated with R-13 fiberglass insulation. One layer of 7/16" thick Oriented Strand Board (OSB) was attached to the exterior side of the wall system. Polar Wall Plus D5 insulated vinyl siding was hung over the OSB.

### ASTM D635 (for vinyl siding only, not foam):

Classified CC1\*\*

\*Tested Specimens did not burn to 25mm mark. Material was shown to be self-extinguishing. Therefore no average time of burning or average extent of burning can be calculated. For more info, obtain a brochure on the fire properties of siding by contacting the Vinyl Siding Institute at [www.vinylsiding.org](http://www.vinylsiding.org).



THE NORANDEX VINYL MANUFACTURING PROCESS HAS EARNED THE IMPRESSIVE MARK OF ISO 9001-2008 THROUGH UNDERWRITERS LABORATORIES AND ENVIRONMENTAL MANAGEMENT (ISO 14001-2004).



Consult the VSI website at [www.vinylsiding.org](http://www.vinylsiding.org) for a current list of certified products and colors.

