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ICC-ES Report

ESR-2246

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Reissued 05/2016
This report is subject to renewal 05/2017.

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
SECTION: 07 25 00—WATER-RESISTIVE BARRIERS/WEATHER BARRIERS

REPORT HOLDER:

NATIONAL SHELTER PRODUCTS, INC.

**50 S.E. BUSH STREET
ISSAQUAH, WASHINGTON 98027**

EVALUATION SUBJECT:

WATER-RESISTIVE BARRIERS: DRYLINE® W BUILDING WRAP, DRYLINE® LP BUILDING WRAP, DRYLINE® HP BUILDING WRAP, DRYLINE® CP BUILDING WRAP, AND DRYLINE® RAINDRAIN® BUILDING WRAP



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DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 25 00—Water-Resistive Barriers/Weather Barriers

REPORT HOLDER:

NATIONAL SHELTER PRODUCTS, INC.
 50 S.E. BUSH STREET
 ISSAQUAH, WASHINGTON 98027
 (800) 552-7775
www.drylinewrap.com

EVALUATION SUBJECT:

WATER-RESISTIVE BARRIERS: DRYLINE® W BUILDING WRAP, DRYLINE® LP BUILDING WRAP, DRYLINE® HP BUILDING WRAP, DRYLINE® CP BUILDING WRAP, AND DRYLINE® RAINDRAIN® BUILDING WRAP

1.0 EVALUATION SCOPE
1.1 Compliance with the following codes:

- 2012, 2009 and 2006 *International Building Code*® (IBC)
- 2012, 2009 and 2006 *International Residential Code*® (IRC)
- 2012, 2009 and 2006 *International Energy Conservation Code*® (IECC)
- 2013 *Abu Dhabi International Building Code* (ADIBC)[†]

[†]The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

Properties evaluated:

- Water resistance
- Surface-burning characteristics
- Air barrier

1.2 Evaluation to the following green code(s) and/or standards:

- 2013 California Green Building Standards Code (CALGreen), Title 24, Part 11
- 2012 and 2015 *International Green Construction Code*® (IgCC)
- 2011 and 2014 ANSI/ASHRAE/USGBC/IES Standard 189.1—Standard for the Design of High-Performance Green Buildings, Except Low-Rise Residential Buildings
- 2012 and 2008 ICC 700 *National Green Building Standard*™ (ICC 700-2012 and ICC 700-2008)

Attributes verified:

- See Section 2.0

2.0 USES

The products are used as water-resistive barriers on the exterior side of exterior walls of buildings of any construction type under the IBC and construction permitted under the IRC. They are equivalent to Grade D paper as described in IBC Section 2510.6 and IRC Section R703.6.3, with a 60-minute water-resistance rating. The products may be used as an air barrier material under IRC Section N1102.4.1 and IECC Sections 402.4 and 502.4.

The attributes of the water-resistive barriers have been verified as conforming to the provisions of (i) CALGreen Section 5.407.1 for water-resistive barriers and Section A4.407.5 for air barriers; (ii) 2012 and 2015 IgCC Section 605.1.2.1 for air barriers; (iii) 2014 ASHRAE 189.1 Section 7.3.1.1 and 2011 ASHRAE 189.1 Section 7.4.2.9 for air barriers; (iv) ICC 700-2012 Section 602.1.8, 11.602.1.8 and 12.5.602.1.8; and (v) ICC 700-2008 Section 602.9 for water-resistive barriers. Note that decisions on compliance for those areas rest with the user of this report. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. These codes or standards often provide supplemental information as guidance.

3.0 DESCRIPTION
3.1 DRYline® W Building Wrap:

This product consists of a woven, microperforated, polyolefin fabric with an additional polyolefin coating, and is available in various colors. The finished product is produced in rolls of varying sizes.

The product has a flame spread index of 25 or less and a smoke-developed index of 450 or less, when tested in accordance with ASTM E84.

DRYline® W Building Wrap has an air leakage rate not exceeding 0.02 L/s/m² at 75 Pa [0.004 cfm/ft² at 0.3 w.g. (1.57 psf)] when used as an air barrier material under IRC Section N1102.4.1 and IECC Section 402.4 or 502.

3.2 DRYline® LP Building Wrap, DRYline® HP Building Wrap:

These products consist of a nonwoven, microporous polyolefin fabric and membrane and are various colors. The finished product is available in low-perm and high-perm versions. The finished products are produced in rolls of varying sizes.

The products have a flame spread index of 25 or less and a smoke-developed index of 450 or less, when tested in accordance with ASTM E84.

The products have an air leakage rate not exceeding 0.02 L/s/m² at 75 Pa [0.004 cfm/ft² at 0.3 w.g. (1.57 psf)] when used as an air barrier material under IRC Section N1102.4.1 and IECC Section 402.4 or 502.

3.3 DRYline[®] CP Building Wrap:

This product consists of a cross-woven polypropylene fabric and nonperforated breathable barrier layer, including stabilizing agents for ultraviolet light and thermal cycling. The finished product is produced in rolls of varying sizes.

The product has a flame spread index of 25 or less and a smoked-developed index of 450 or less, when tested in accordance with ASTM E84.

The product has an air leakage rate not exceeding 0.02 L/s/m² at 75 Pa [0.004 cfm/ft² at 0.3 w.g. (1.57 psf)] when used as an air barrier material under IRC Section N1102.4.1 and IECC Section 402.4 or 502.

3.4 DRYline[®] Raindrain[®] Building Wrap:

This product consists of a polyethylene nonwoven fabric laminated to a polyethylene microporous film. The finished product has a three-dimensional surface for drainage efficiency and is produced in rolls of varying sizes.

The product has a flame spread index of 25 or less and a smoked-developed index of 450 or less, when tested in accordance with ASTM E84.

The product has an air leakage rate not exceeding 0.02 L/s/m² at 75 Pa [0.004 cfm/ft² at 0.3 w.g. (1.57 psf)] when used as an air barrier material under IRC Section N1102.4.1 and IECC Section 402.4 or 502.

4.0 INSTALLATION

4.1 General:

The water-resistive barriers described in this report are installed after wall framing is completed and before or after windows and doors are installed. The roll is placed approximately 6 inches (152 mm) from the starting corner and is then unrolled around the building, fastened to the sheathing with corrosion-resistant staples, corrosion-resistant nails, or corrosion-resistant nails or staples having plastic washer heads, spaced in accordance with manufacturer's published installation guidelines. The printed side of the barrier is installed facing the outside. A minimum of 6 inches (152 mm) of overlap is to be provided for vertical seams and 2 inches (51 mm) for horizontal seams, except where the manufacturer's installation instructions specify a greater overlap dimension. When use

is over wood-based sheathing in exterior plaster applications, the Grade D water-resistive barrier must be applied over sheathing in accordance with IBC Section 2510.6 or IRC Section R703.6.3. For cementitious coatings or exterior insulation and finish systems, application is to be in accordance with the evaluation report on the exterior coating.

The manufacturer's published installation instructions and this report are to be strictly adhered to. If requested by the code official, a copy of this report is to be available at the jobsite during installation.

5.0 CONDITIONS OF USE

The water-resistive barriers described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The water-resistive barriers must be installed in accordance with the manufacturer's published installation instructions, the requirements of the applicable code and this report. In the event of a conflict between this report and the manufacturer's published installation instructions, this report governs.
- 5.2 The water-resistive barriers must be covered by an exterior wall finish complying with the requirements of the applicable code.
- 5.3 Use of the water-resistive barriers as a means for drainage has not been evaluated and is outside the scope of this report.
- 5.4 Under the 2012 IBC, installation on exterior walls on buildings of Type I, II, III and IV construction is limited to buildings that are not greater than 40 feet (12.2 m) in height above grade plane.

6.0 EVIDENCE SUBMITTED

- 6.1 Data in accordance with the ICC-ES Acceptance Criteria for Water-resistive Barriers (AC38), dated January 2013.
- 6.2 Report of testing in accordance with ASTM E84.
- 6.3 Reports of testing in accordance with ASTM E2178.

7.0 IDENTIFICATION

The products described in this report are identified by a label on the container of each roll of membrane and by printing on the product, with the name, address and telephone number of the report holder, the product name, and the evaluation report number (ESR-2246).