

# ICC-ES Evaluation Report

**ESR-1197\***

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**DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION**  
**Section: 07 25 00—Water-Resistive Barriers/Weather Barriers**  
**Section: 07 27 00—Air Barriers**

**REPORT HOLDER:**

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**EVALUATION SUBJECT:**

**R-WRAP® PROTECTIVE HOUSE WRAP, BARRICADE® BUILDING WRAP, MARVELGUARD® HOUSE WRAP, BARRICADE PLUS® PROTECTIVE HOUSE WRAP AND WATER-RESISTIVE BARRIERS**

**1.0 EVALUATION SCOPE****Compliance with the following codes:**

- 2009 *International Building Code*® (2009 IBC)
- 2009 *International Residential Code*® (2009 IRC)
- 2009 *International Energy Conservation Code*® (IECC)
- Other Codes (see Section 8.0)

**Properties evaluated:**

- Water resistance
- Surface burning characteristics
- Air leakage (R-Wrap® Protective House and Barricade Plus Wrap)

**2.0 USES**

R-Wrap® Protective House Wrap, Barricade® Building Wrap, MarvelGuard® House Wrap, and Barricade Plus® Protective House Wrap 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. The products are alternatives to the water-resistive barrier specified in IBC Section 1404.2; the products comply, when installed in two layers, as a water-resistive barrier specified in IBC Section 2510.6; and are alternatives to the water-resistive barrier specified in IRC Section R703.2.

R-Wrap® Protective House Wrap and Barricade Plus® Protective House Wrap are considered equivalent to a

60-minute Grade D paper in accordance with the exception to Section 2510.6 of the IBC and Section R703.6.3 of the IRC.

Barricade Plus and R-Wrap® Protective House Wrap may be used as an air barrier material in accordance with IRC Section N1102.4.1 and IECC Sections 402.4 and 502.4.

**3.0 DESCRIPTION****3.1 General:**

**3.1.1 R-Wrap® Protective House Wrap:** R-Wrap Protective House Wrap consists of a nonwoven polyethylene fabric. Sheets are available in rolls of varying size.

R-Wrap Protective House Wrap has an air leakage rate not exceeding 0.02 L/s/m<sup>2</sup> at 75 Pa [0.004 cfm/ft<sup>2</sup> at 0.3 inch w.g. (1.57 psf)] when used as an air barrier material in accordance with IRC Section N1102.4.1 and IECC Sections 402.4 and 502.4.

**3.1.2 Barricade® Building Wrap:** Barricade Building Wrap consists of a perforated, micro-porous, woven polyolefin fabric, with an additional polyolefin coating. Sheets are available in rolls of varying size.

**3.1.3 MarvelGuard® House Wrap:** MarvelGuard House Wrap consists of a perforated, woven polyolefin fabric with an additional polyolefin coating. Sheets are available in rolls of varying size.

**3.1.4 Barricade Plus® Protective House Wrap:** Barricade Plus® Protective House Wrap consists of a nonperforated, nonwoven polyolefin fabric. Sheets are available in rolls of varying size.

Barricade Plus House Wrap has an air leakage rate not exceeding 0.02 L/s/m<sup>2</sup> at 75 Pa [0.004 cfm/ft<sup>2</sup> at 0.3 inch w.g. (1.57 psf)] when used as an air barrier material in accordance with IRC Section N1102.4.1 and IECC Sections 402.4 and 502.4.

**3.2 Surface-burning Characteristics:**

The water-resistive barriers listed in this report have a flame-spread index of less than 25 and a smoke-developed index of less than 450, when tested in accordance with ASTM E 84.

**4.0 INSTALLATION****4.1 General:**

The water-resistive barriers listed in this report must be installed on the exterior side of exterior walls over exterior sheathing or insulation. The printed side must be installed facing the outside.

**\*Revised September 2011**

The report holder's published installation instructions and this report must be strictly adhered to, and a copy of the instructions must be available at all times on the jobsite during installation. The instructions within this report govern if there are any conflicts between the report holder's published installation instructions and this report.

#### 4.2 Application:

The water-resistive barriers listed in this report must be installed after wall framing is completed. The start of the roll must be placed a distance from the corner of approximately 1 foot (0.3 m) for R-Wrap Protective House Wrap and 2 to 3 feet (0.6 to 0.9 m) for Barricade Building Wrap, MarvelGuard House Wrap and Barricade Plus Protective House Wrap, and fastened using staples, large-headed nails, or roofing nails spaced a maximum of 18 inches (457 mm) on center. The wrap is then unrolled around the building and fastened with nails or staples spaced a maximum of 32 inches (813 mm) on center, vertical and horizontal. A minimum of 2 inches (51 mm) of overlap is required for the sheet in the horizontal dimension, while 6 inches (152 mm) is required in the vertical dimension.

When used over foam insulation boards, the sheet must be fastened with roofing nails or other large-headed nails long enough to penetrate through the insulation into the framing studs.

When use is over wood-based sheathing in exterior plaster applications, in areas enforcing the IBC and IRC the membrane must be installed in accordance with IBC Section 2510.6 or IRC Section R703.6.3. The R-Wrap and Barricade Plus barriers are equivalent to a 60-minute Grade D paper and may be installed in accordance with the exception to IBC Section 2510.6 and IRC Section R703.6.3. For cementitious coatings or exterior insulation and finish systems, application of the barrier must be in accordance with the evaluation report on the exterior coating.

#### 4.3 Air Barrier Material:

When R-Wrap<sup>®</sup> Protective House Wrap and Barricade Plus Wrap are used as an air barrier, the materials must be installed in accordance with the report holder's installation instructions and this report.

### 5.0 CONDITIONS OF USE

The R-Wrap<sup>®</sup> Protective House and Barricade Plus Wrap, Barricade<sup>®</sup> Building Wrap, MarvelGuard<sup>®</sup> House Wrap, and Barricade Plus<sup>®</sup> Protective House Wrap 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 listed in this report must be covered by an exterior wall covering complying with the requirements of the applicable code.
- 5.2 This report is based on air leakage rates for the products as an air barrier only. The design and evaluation of the air barrier assembly, of which the products are a component, is outside the scope of this report.

### 6.0 EVIDENCE SUBMITTED

- 6.1 Data in accordance with ICC-ES Acceptance Criteria for Water-resistive Barriers (AC38), dated June 2011.
- 6.2 Test reports in accordance with ASTM E 84.
- 6.3 Test reports on air leakage in accordance with ASTM E 2178.

### 7.0 IDENTIFICATION

Sheets shall be identified with the report holder's trade name (Berry Plastics Tapes and Coatings Division) and address, the product trade name, and the evaluation report number (ESR-1197).

### 8.0 OTHER CODES

#### 8.1 Evaluation Scope:

In addition to the codes referenced in Section 1.0, the products covered in this report were also evaluated for compliance with the requirements of the following codes:

- 2006 *International Building Code*<sup>®</sup> (2006 IBC)
- 2006 *International Residential Code*<sup>®</sup> (2006 IRC)
- BOCA<sup>®</sup> *National Building Code/1999* (BNBC)
- 1999 *Standard Building Code*<sup>®</sup> (SBC)
- 1997 *Uniform Building Code*<sup>™</sup> (UBC)

#### 8.2 Uses:

See Section 2.0, with the following modifications:

The products are also alternatives to the Type 15 felt specified in BNBC Section 1406.3.6, the Type 15 felt specified in SBC Section 2303.3 and Grade D building paper as described in UBC Standard 14-1.

The water-resistive barriers recognized in this report are limited to the Type 5 construction under the BNBC, Type VI under the SBC and Type V under the UBC.

#### 8.3 Description:

See Section 3.0.

#### 8.4 Installation:

See Section 4.0, except for the following modification for the UBC: In areas enforcing the UBC, either two layers of the membrane or one layer of the membrane and one layer of an approved water-resistive barrier must be installed in accordance with UBC Section 2506.4.

#### 8.5 Conditions of Use:

See Section 5.0.

#### 8.6 Evidence Submitted:

See Section 6.0.

#### 8.7 Identification:

See Section 7.0.