

# ICC-ES Evaluation Report

**ESR-2906**

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*This report is subject to renewal in one year.*
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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:**

**PACTIV BUILDING PRODUCTS**  
 2100 RIVEREDGE PARKWAY, SUITE 175  
 ATLANTA, GEORGIA 30328  
 (800) 241-4402  
[www.green-guard.com](http://www.green-guard.com)

**ADDITIONAL LISTEES:**

**GEORGIA-PACIFIC WOOD PRODUCTS, LLC**  
 55 PARK PLACE, 17<sup>TH</sup> FLOOR  
 ATLANTA, GEORGIA 30303

**LOWES**  
 1000 LOWES BOULEVARD  
 MOORESVILLE, NORTH CAROLINA 28117

**EVALUATION SUBJECT:**

**GREENGUARD® VALUE WRAP BUILDING WRAP, GREENGUARD® CLASSIC WRAP BUILDING WRAP, GREENGUARD® ULTRA WRAP BUILDING WRAP, GREENGUARD® RAINDROP BUILDING WRAP, GREENGUARD® MAX BUILDING WRAP, GREENGUARD® C500 BUILDING WRAP, AND GREENGUARD® C2000 BUILDING WRAP**

**ADDITIONAL LISTEE PRODUCT NAMES:**

**GEORGIA-PACIFIC WOOD PRODUCTS, LLC:**  
*Georgia-Pacific Nautilus™ (refer to Section 3.1)*

**LOWES:**  
*LOWES HOUSEWRAP (refer to Section 3.2)*

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

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

**Properties evaluated:**

- Physical properties
- Surface-burning characteristics
- Air leakage

**2.0 USES**

GreenGuard® Value Wrap Building Wrap, GreenGuard® Classic Wrap Building Wrap, GreenGuard® Ultra Wrap Building Wrap, GreenGuard® RainDrop Building Wrap, GreenGuard® MAX Building Wrap, GreenGuard® C500 Building Wrap and GreenGuard® C2000 Building Wrap are used as water-resistive barriers on the exterior side of exterior walls of buildings of any type of construction allowed by the IBC and construction permitted under the IRC.

GreenGuard® Value Wrap Building Wrap, GreenGuard® Classic Wrap Building Wrap, GreenGuard® Ultra Wrap Building Wrap, GreenGuard® RainDrop Building Wrap, GreenGuard® MAX Building Wrap, GreenGuard® C500 Building Wrap and GreenGuard® C2000 Building Wrap are equivalent to Grade D building paper that complies with IBC Sections 1404.2 and 2510.6 and IRC Section R703.

GreenGuard® Ultra Wrap Building Wrap, GreenGuard® RainDrop Building Wrap, GreenGuard® MAX Building Wrap, GreenGuard® C500 Building Wrap and GreenGuard® C2000 Building Wrap may be used as air barrier materials under IRC Section N1102.4.1 and IECC Sections 402.4 and 502.4.

**3.0 DESCRIPTION**
**3.1 GreenGuard® Value Wrap Building Wrap:**

GreenGuard® Value Wrap Building Wrap is a cross-woven, micro-perforated polyolefin material with a polyolefin coating, 0.008 inch (0.2 mm) thick and with an average weight of 1.9 ounces per square yard (64 g/m<sup>2</sup>). It is produced in rolls of varying sizes.

GreenGuard® Value Wrap Building Wrap is also sold under the name Georgia-Pacific Nautilus™. This name applies whenever GreenGuard® Value Wrap Building Wrap is referenced in this report.

**3.2 GreenGuard® Classic Wrap Building Wrap:**

GreenGuard® Classic Wrap Building Wrap is a cross-woven, micro-perforated polyolefin material with a polyolefin coating, 0.008 inch (0.2 mm) thick and with an average weight of 2.2 ounces per square yard (73 g/m<sup>2</sup>). It is produced in rolls of varying sizes.

GreenGuard® Classic Wrap Building Wrap is also sold under the name Lowe's Housewrap. This name applies whenever GreenGuard® Classic Wrap Building Wrap is referenced in this report.

### 3.3 GreenGuard® Ultra Wrap Building Wrap:

GreenGuard® Ultra Wrap Building Wrap is a nonwoven, nonperforated material with a vapor-permeable polyolefin coating, 0.008 inch (0.2 mm) thick and with an average weight of 2.0 ounces per square yard (68 g/m<sup>2</sup>). It is produced in rolls of varying sizes.

### 3.4 GreenGuard® RainDrop Building Wrap:

GreenGuard® RainDrop Building Wrap is a cross-woven, nonperforated polyolefin material with a vapor-permeable polyolefin coating, 0.018 inch (0.46 mm) thick and with an average weight of 2.4 ounces per square yard (78 g/m<sup>2</sup>). It is produced in rolls of varying sizes.

### 3.5 GreenGuard® MAX Building Wrap:

GreenGuard® MAX Building Wrap is a cross-woven, nonperforated polyolefin material with a vapor-permeable polyolefin coating, 0.018 inch (0.46 mm) thick and with an average weight of 2.2 ounces per square yard (75 g/m<sup>2</sup>). It is produced in rolls of varying sizes.

### 3.6 GreenGuard® C500 Building Wrap:

GreenGuard® C500 Building Wrap is a cross-woven, nonperforated polyolefin material with a vapor-permeable polyolefin coating, 0.010 inch (0.26 mm) thick, and with an average weight of 3.6 ounces per square yard (122 g/m<sup>2</sup>). It is produced in rolls of varying sizes.

### 3.7 GreenGuard® C2000 Building Wrap:

GreenGuard® C2000 Building Wrap is a spun-bonded, vapor-permeable polyolefin material, 0.024 inch (0.60 mm) thick, and with an average weight of 5.1 ounces per square yard (173 g/m<sup>2</sup>). It is produced in rolls of varying sizes.

### 3.8 Surface-Burning Characteristics:

GreenGuard® Building Wraps 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.

### 3.9 Air Barrier Material:

When used as an air barrier material, the products listed in Sections 3.3 through 3.7 have an air leakage rate not exceeding 0.02 L/s-m<sup>2</sup> at 75 Pa [0.0004 cfm/ft<sup>2</sup> at 0.3 inch w.g. (1.57 psf)].

## 4.0 INSTALLATION

### 4.1 General:

The GreenGuard® Building Wraps covered by 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.

The manufacturer's published installation instructions and this report must be strictly adhered to and a copy of this report must be available at the jobsite during installation.

### 4.2 Application:

The water-resistive barriers described in this report are installed after wall framing is completed and before windows and doors are installed. If doors or windows have already been installed, the water-resistive barriers must be trimmed as close to the opening as possible and sealed with GreenGuard Contractor Tape (Standard or Enhanced)

or an equivalent adhesive tape approved by Pactiv Building Products. The roll is placed approximately 24 inches (610 mm) from the starting corner and fastened to framing members or sheathing with corrosion-resistant staples with minimum 1-inch (25.4 mm) crowns, corrosion-resistant nails having minimum 3/8-inch-diameter (9.5 mm) heads, or corrosion-resistant nails having 1-inch-diameter (25.4 mm) plastic washer heads, spaced a maximum of 16 inches (406 mm) on center vertically and 32 inches (813 mm) on center horizontally; and is then unrolled around the building and fastened with nails or staples as described above. Fasteners must penetrate a minimum of 1/2 inch (12.7 mm) into the nailing base. A minimum of 6 inches (152 mm) of overlap for vertical seams and 2 inches (51 mm) for horizontal seams is required, except where the manufacturer's published installation instructions specify a greater overlap dimension. Upper courses of housewrap must overlap lower courses in a shingle-like manner. When use is over wood-based sheathing in exterior plaster applications, two layers of the product 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 must be in accordance with the ICC-ES evaluation report on the exterior wall covering.

### 4.3 Air Barrier:

When used as an air barrier material, the products listed in Sections 3.3 through 3.7 must be installed in accordance with the manufacturer's published installation instructions and this report.

## 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 Installation must comply with this report, the applicable code and the manufacturer's published installation instructions. In the event of a conflict between the manufacturer's published installation instructions and this report, this report governs.
- 5.2 The water-resistive barriers must be covered with an approved exterior wall covering in accordance with the applicable code.
- 5.3 This report provides air leakage rate for the products as an air barrier material 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 the ICC-ES Acceptance Criteria for Water-resistive Barriers (AC38), dated February 2011.
- 6.2 Reports of surface-burning characteristics testing in accordance with ASTM E 84.
- 6.3 Data on air permeance in accordance with ASTM E2178.

## 7.0 IDENTIFICATION

The water-resistive barriers described in this report must be identified by a label on each roll of membrane, bearing the manufacturer's or listee's name (Pactiv Building Products, Lowes or Georgia-Pacific Wood Products, LLC) and address, the product name, and the evaluation report number (ESR-2906).

## 8.0 OTHER CODES

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

- 2006 *International Building Code*® (2006 IBC)
- 2006 *International Residential Code*® (2006 IRC)
- 2006 *International Energy Conservation Code*® (2006 IECC)
- 2003 *International Building Code*® (2003 IBC)
- 2003 *International Residential Code*® (2003 IRC)
- 2003 *International Energy Conservation Code*® (2003 IECC)

The GreenGuard® Value Wrap Building Wrap, GreenGuard® Classic Wrap Building Wrap, GreenGuard® Ultra Wrap Building Wrap, GreenGuard® RainDrop Building Wrap, GreenGuard® MAX Building Wrap, GreenGuard® C500 Building Wrap and GreenGuard® C2000 Building Wrap described in this report comply with, or are suitable alternatives to what is specified in, those codes listed above, as described in Sections 2.0 through 7.0, except that Section 2.0 must be modified as follows:

The term “water-resistive barrier” includes water-resistive barriers under 2003 IBC Section 1404.2 and weather-resistant sheathing paper under 2003 IRC Section R703.