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# ICC-ES Report

# ESR-3416

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**DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION**  
**SECTION: 07 25 00—WATER-RESISTIVE BARRIERS/WEATHER BARRIER**  
**SECTION: 07 27 00—AIR BARRIERS**

**REPORT HOLDER:**

**PROSOCO, INC.**

**3741 GREENWAY CIRCLE  
LAWRENCE, KANSAS 66046**

**EVALUATION SUBJECT:**

**R-GUARD CAT 5<sup>®</sup> AIR & WATER-RESISTIVE BARRIER SYSTEM**



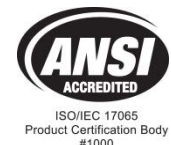
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# ICC-ES Evaluation Report

**ESR-3416**

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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:**

**PROSOCO, INC.**  
3741 GREENWAY CIRCLE  
LAWRENCE, KANSAS 66046  
(800) 255-4255  
[www.prosoco.com](http://www.prosoco.com)

**EVALUATION SUBJECT:**

**R-GUARD CAT 5® AIR & WATER-RESISTIVE BARRIER SYSTEM**

**1.0 EVALUATION SCOPE**

**1.1 Compliance with the following codes:**

- 2009 *International Building Code*® (IBC)
- 2012 and 2009 *International Residential Code*® (IRC)
- 2009 *International Energy Conservation Code*® (IECC)

**Properties evaluated:**

- Water-resistive barrier
- Air barrier material
- Surface-burning characteristics

**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 3.1

**2.0 USES**

The R-Guard Cat 5® Air & Water-resistive Barrier System is used as an alternative to the water-resistive barrier

specified in Section 1404.2 of the IBC and Section R703.2 of the IRC when installed over wood and glass-mat faced gypsum-based sheathing in exterior walls of any construction type. The system also may be used as an air barrier material in accordance with IRC Section N1102.4 and IECC Sections 402.4 and 502.4.

R-Guard Cat 5® Air & Water-resistive Barrier System complying with ASTM E2570 is used over sheathing where EIFS cladding is to be used in accordance with IBC Section 1408.4.1 and IRC Section R703.9.2.

The R-Guard Cat 5® Air & Water-resistive Barrier System installed as a water-resistive barrier and an air barrier material, is recognized for use on Types I, II III, IV and Type V construction.

**3.0 DESCRIPTION**

**3.1 General:**

The R-Guard Cat 5® Air & Water-resistive Barrier System consists of: R-Guard Cat 5®, R-Guard Joint & Seam Filler, R-Guard GypPrime® and R-Guard FastFlash®.

The attributes of the R-Guard Cat 5® Air & Water-resistive Barrier System have been verified as conforming to the requirements of (i) 2013 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.

**3.1.1 R-Guard Cat 5® Water-Resistive Barrier Coating:**

R-Guard Cat 5® water-resistive barrier is a ready-mixed, flexible, polymer-based, roller-applied liquid coating material. It is packaged in 5-gallon (19 L) buckets weighing 61 pounds (27.7 kg) and has a one-year shelf life after the date of manufacture when stored in its original unopened container at temperatures between 40°F (4.4°C) and 80°F (27°C). The coating is an adobe brown color. The R-Guard Cat 5® water-resistive barrier coating 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.

**3.1.2 R-Guard Cat 5® Rain Screen Water-resistive Barrier Coating:** R-Guard Cat 5® Rain Screen water-

resistive barrier coating is identical to the R-Guard Cat 5<sup>®</sup> Air & Water-Resistive Barrier described in Section 3.1.1, except it is a dark bronze color.

**3.1.3 R-Guard Joint & Seam Filler:** R-Guard Joint & Seam Filler is a single-component, a ready-mixed, flexible, polymer-based, fiber-reinforced seam and crack filling liquid compound. R-Guard Joint & Seam Filler is packaged in 20-ounce (591 mL) and 29-ounce (858 mL) caulk-gun tubes and sausages. It has a one-year shelf life after the date of manufacture when stored in its original unopened container at temperatures between 40°F (4.4°C) and 80°F (27°C).

**3.1.4 R-Guard FastFlash<sup>®</sup>:** R-Guard FastFlash<sup>®</sup> is a single-component, ready-mixed, flexible, polymer-based, gun-grade material. R-Guard FastFlash<sup>®</sup> is packaged in 20-ounce (591 mL) and 29-ounce (858 mL) caulk-gun tubes and sausages. It has a one-year shelf life after the date of manufacture when stored in its original unopened container at temperatures between 40°F (4.4°C) and 80°F (27°C).

**3.1.5 R-Guard GypPrime<sup>®</sup>:** R-Guard GypPrime<sup>®</sup> is a single-component liquid applied to the exposed edges of the gypsum board at openings and corners.

### 3.2 Water Vapor Transmission:

The water vapor transmission value of R-Guard Cat 5<sup>®</sup>, as determined in accordance with ASTM E96, Method B (Water Method), is as follows:

- R-Guard Cat 5<sup>®</sup>: 17.71 perms (117.11 g/m<sup>2</sup> per 24 hours) when tested at a thickness of 12 mils [0.012 inch (0.30 mm)].
- R-Guard Cat 5<sup>®</sup> with R-Guard Joint & Seam Filler: 12.45 perms (82.32 g/m<sup>2</sup> per 24 hours) when tested at a thickness of 32 mils [0.032 inch (0.81 mm)].

### 3.3 Sheathing:

The use of the R-Guard Cat 5<sup>®</sup> Air & Water-resistive Barrier System is limited to applications over the following sheathing materials:

- Oriented strand board, Exposure 1, complying with U.S. DOC PS-2
- Glass-mat faced gypsum recognized in a current evaluation report as complying with ASTM C1177.

## 4.0 INSTALLATION

### 4.1 General:

The installation of the R-Guard Cat 5<sup>®</sup> Air & Water-resistive Barrier System must comply with this report and the manufacturer's published installation instructions. The manufacturer's published installation instructions must be available at the jobsite at all times during installation.

### 4.2 Substrate Preparation:

The R-Guard Cat 5<sup>®</sup> Air & Water-resistive Barrier System must be installed on the exterior side of vertical exterior walls, over the exterior sheathing. The sheathing type must be one of those listed in Section 3.3 of this report. Sheathing must be installed as required by the applicable code. The sheathing surfaces must be free of all bond-inhibiting materials, including dirt, oil and other foreign matter. The R-Guard Cat 5<sup>®</sup> Air & Water-resistive Barrier System must not be installed on wet surfaces, below-grade surfaces, or on surfaces subject to water immersion. The substrate must be sufficiently dry during application to ensure bonding (adhesion) of the coating, rough opening treatment and joint sealant. For glass-mat faced gypsum based sheathing, R-Guard GypPrime<sup>®</sup> sealant must be

applied to the exposed edges of the gypsum board. Damaged sheathing must be removed and replaced.

### 4.3 R-GUARD Joint & Seam Filler Application:

R-Guard Joint & Seam Filler must be applied to a minimum thickness of 20 wet mils (0.51 mm) to all inside/outside corners, all wall sheathing joints and must cover the heads of all overdriven sheathing fasteners.

### 4.4 R-Guard FastFlash<sup>®</sup> Application:

R-Guard FastFlash<sup>®</sup> is applied in the rough openings, extending onto the sheathing surface 4 to 6 inches (102 to 152 mm). Flashing complying with the applicable code or recognized in an ICC-ES evaluation report, must be installed at transitions to beams, columns, window and door openings, etc., in shingle fashion to shed water.

### 4.5 R-GUARD Cat 5<sup>®</sup> R-GUARD Cat 5<sup>®</sup> Water-Resistive Barrier Coating Application:

The R-Guard Cat 5<sup>®</sup> water-resistive barrier coating must be roller-applied over the sheathing after the R-Guard Joint & Seam Filler and R-Guard FastFlash<sup>®</sup> have developed a skin on their surfaces. R-Guard Cat 5<sup>®</sup> must be applied to a uniform wet film thickness of 12 mils [0.012 inch (0.30 mm)]. The coating, rough opening treatment and joint sealant should be applied when air and surface temperatures are between 40°F (4°C) and 110°F (43°C). The coating, filler and rough opening treatment materials must be dry to the touch before covering. At 70°F (21°C) and 50 percent relative humidity, R-Guard Cat 5<sup>®</sup> coating, R-Guard Joint & Seam Filler and R-Guard FastFlash<sup>®</sup> are typically dry to the touch within two hours. Curing time varies depending on temperature/humidity and surface conditions; cool and/or dry conditions may slow curing, while hot and/or damp conditions may accelerate curing.

## 5.0 CONDITIONS OF USE

The R-Guard Cat 5<sup>®</sup> water-resistive barrier coating system described in this report complies with, or is a suitable alternative 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 manufacturer's published installation instructions, and the applicable code. In the event of a conflict between this report and the manufacturer's published installation instructions, this report governs.
- 5.2** For EIFS application, special inspections are required at the jobsite in accordance with 2009 IBC Section 1704.14.1. For other applications, special inspections are not required at the jobsite if installation is done by an installer or contractor trained by the manufacturer, and a certificate of installation is presented to the code official at the completion of each project; otherwise, special inspections are required at the jobsite in accordance with 2009 IBC Section 1704.15. Duties of the inspector include verifying field preparation of materials, expiration dates, installation components, curing of components, installation of joints and sealants, applied dry-film thickness and interface of coating material with flashings. Special inspections are not required under the IRC.
- 5.3** Use of the R-Guard FastFlash<sup>®</sup> as a flashing material, integrated with the R-Guard Cat 5<sup>®</sup> water-resistive barrier coating, around windows, doors and other openings on exterior walls, is outside the scope of this evaluation report.
- 5.4** The R-Guard Cat 5<sup>®</sup> water-resistive barrier coating system is limited to installations on vertical walls.

- 5.5 The R-Guard Cat 5<sup>®</sup> water-resistive barrier coating system must be covered with an exterior wall covering complying with the applicable code or recognized in a current ICC-ES evaluation report.
- 5.6 Repairing of joints and cracks greater than 1/8 inch (3.2 mm) using R-Guard Cat 5<sup>®</sup> water-resistive barrier coating system 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 Coatings Used as Weather-resistive Barriers over Exterior Sheathing (AC212), dated November 2012.
- 6.2 Data in accordance with ASTM E84 (UL 723)

#### 7.0 IDENTIFICATION

Packages of the R-Guard Cat 5<sup>®</sup>, R-Guard Cat 5<sup>®</sup> Rain Screen and R-Guard Joint & Seam Filler described in this

report must be identified by a label bearing the manufacturer's name (PROSOCO, Inc.) and address, product name (R-Guard Cat 5<sup>®</sup>, R-Guard Cat 5<sup>®</sup> Rain Screen or R-Guard Joint & Seam Filler) and product number, identification of components, lot or batch number, quantity of material in packaged mix, storage instructions, date of manufacture, shelf life, and the ICC-ES evaluation report number (ESR-3416).

Packages of the R-Guard GypPrime<sup>®</sup> and R-Guard FastFlash<sup>®</sup> described in this report must be identified by a label bearing the manufacturer's name (PROSOCO, Inc.) and address, product name (R-Guard GypPrime<sup>®</sup> or R-Guard FastFlash<sup>®</sup>) and product number, identification of components, lot or batch number, quantity of material in packaged mix, storage instructions, date of manufacture, and shelf life.

## ICC-ES Evaluation Report

## ESR-3416 CBC and CRC Supplement

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**Section: 07 25 00—Water-Resistive Barriers/Weather Barriers**

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### EVALUATION SUBJECT:

**R-GUARD CAT 5® AIR & WATER-RESISTIVE BARRIER SYSTEM**

### 1.0 REPORT PURPOSE AND SCOPE

#### Purpose:

The purpose of this evaluation report supplement is to indicate that the R-Guard Cat 5® Air & Water-resistive Barrier System, recognized in ICC-ES master evaluation report ESR-3416, has also been evaluated for compliance with the codes noted below.

#### Applicable code editions:

- 2013 *California Building Code*® (CBC)
- 2013 *California Residential Code*® (CRC)
- 2013 *California Energy Code*® (CEC)

### 2.0 CONCLUSIONS

#### 2.1 CBC:

The R-Guard Cat 5® Air & Water-resistive Barrier System, described in Sections 2.0 through 7.0 of the master evaluation report ESR-3416, complies with CBC Chapter 14, provided the design and installation are in accordance with the 2009 *International Building Code*® provisions noted in the master report and the applicable provisions of the CBC. Use as an air barrier must be in accordance with the CEC.

The R-Guard Cat 5® Air & Water-resistive Barrier System has not been evaluated under CBC Chapter 7A for use in the exterior design and construction of new buildings located in any Fire Hazard Severity Zone within State Responsibility Areas or any Wildland–Urban Interface Fire Area.

#### 2.2 CRC:

The R-Guard Cat 5® Air & Water-resistive Barrier System, described in Sections 2.0 through 7.0 of the master evaluation report ESR-3416, complies with CRC Chapter 7, provided the design and installation are in accordance with the 2009 *International Residential Code*® provisions noted in the master report and the applicable provisions of the CRC.

The R-Guard Cat 5® Air & Water-resistive Barrier System has not been evaluated under CRC Section R327 for use in the exterior design and construction of new buildings located in a Fire Hazard Severity Zone within State Responsibility Areas or any Wildland–Urban Interface Fire Area.

The system recognized in this supplement has not been evaluated for compliance with the International Wildland–Urban Interface Code®.

This supplement expires concurrently with the master report, reissued February 2017.

## ICC-ES Evaluation Report

## ESR-3416 FBC Supplement

Reissued February 2017

This report is subject to renewal February 2019.

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### EVALUATION SUBJECT:

**R-GUARD CAT 5® AIR & WATER-RESISTIVE BARRIER SYSTEM**

#### 1.0 REPORT PURPOSE AND SCOPE

##### Purpose:

The purpose of this evaluation report supplement is to indicate that the R-Guard Cat 5® Air & Water-resistive Barrier System, recognized in ICC-ES master report ESR-3416, has also been evaluated for compliance with the codes noted below.

##### Applicable code editions:

- 2010 *Florida Building Code—Building*
- 2010 *Florida Building Code—Residential*

#### 2.0 CONCLUSIONS

The R-Guard Cat 5® Air & Water-resistive Barrier System, as described in Sections 2.0 through 8.0 of the master evaluation report ESR-3416, complies with the 2010 *Florida Building Code—Building* and 2010 *Florida Building Code—Residential*, provided the design and installation are in accordance with the *International Building Code*® provisions noted in the master report.

Use of the R-Guard Cat 5® Air & Water-resistive Barrier System for compliance with the High-Velocity Hurricane Zone provisions of the 2010 *Florida Building Code—Building* and 2010 *Florida Building Code—Residential* has not been evaluated, and is outside the scope of this evaluation report.

For products falling under Florida Rule 9N-3, verification that the report holder's quality assurance program is audited by a quality-assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the master report, reissued February 2017.