



● Compliance with International Codes  
● Compliance with State Codes

## ICC-ES Evaluation Report ESR-3391

Reissued November 2021

This report is subject to renewal November 2022.

**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:**

OMEGA PRODUCTS INTERNATIONAL, INC.

**EVALUATION SUBJECT:**

AKROGUARD WATER-RESISTIVE COATING

### 1.0 EVALUATION SCOPE

#### 1.1 Compliance with the following codes:

- 2018, 2015, 2012 and 2009 *International Building Code*® (IBC)
- 2018, 2015, 2012 and 2009 *International Residential Code*® (IRC)
- 2018, 2015, 2012 and 2009 *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-resistive barrier
- Surface-burning characteristics
- Air barrier
- Water vapor transmission

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

- 2019 California Green Building Standards Code (CALGreen), Title 24, Part 11
- 2015 and 2012 *International Green Construction Code*® (IgCC)
- 2014 and 2011 ANSI/ASHRAE/USGBC/IES Standard 189.1—Standard for the Design of High-Performance Green Buildings, Except Low-Rise Residential Buildings
- 2015, 2012 and 2008 ICC 700 *National Green Building Standard*™ (ICC 700-2015, ICC 700-2012 and ICC 700-2008)

**Attribute verified:**

See Section 3.1

### 2.0 USES

The AkroGuard water-resistive coating system is used as an alternative to the water-resistive barrier specified in 2018 IBC Section 1403.2 (2015, 2012 and 2009 IBC Section 1404.2) and IRC Section R703.2.

The AkroGuard water-resistive barrier coating system may be used as air barrier material under IRC Section N1102.4 and 2018 and 2015 IECC Sections C402.5 and R402.4 (2012 IECC Sections C402.4 and R402.4 and 2009 IECC Sections 402.4 and 502.4).

The AkroGuard water-resistive coating system may be used in all types of construction, except that under the 2018, 2015 and 2012 IBC for Types I through IV construction, recognition is limited to use in exterior walls of buildings having a maximum height of 40 feet (12.2 m) above grade plane. For recognition under the 2018 and 2015 IBC, the AkroGuard water-resistive coating system may be used on exterior walls of buildings of Types I, II, III or IV construction that are greater than 40 feet (12.2 m), provided installation complies with Exception 1 of the 2018 IBC Section 1402.5 (2015 IBC Section 1403.5). The AkroGuard water-resistive coating system may also be used on construction permitted under the IRC.

### 3.0 DESCRIPTION

#### 3.1 General:

The AkroGuard water-resistive coating system consists of components called AkroGuard, AkroFill, and AkroFlex Mesh.

The attributes of the water-resistive coating system have been verified as conforming to the requirements of (i) CALGreen Section 5.407.1 for water-resistive barriers and Section A4.407.5 for air barriers; (ii) 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 700-2015 Section 602.1.8, 11.602.1.8 and 12.6.602.1.8; (v) ICC 700-2012 Section 602.1.8, 11.602.1.8 and 12.5.602.1.8; and (vi) 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 AkroGuard:** AkroGuard is an acrylic-based coating and is available in 5-gallon (18.9 L) containers. AkroGuard has a shelf life of two years from the date of manufacture when stored in unopened containers at temperatures maintained between 40°F and 90°F (4°C and 32°C) and out of direct sunlight.

**3.1.2 AkroFill:** AkroFill is an acrylic-based coating and is available in 5-gallon (18.9 L) containers. AkroFill has a shelf life of two years from the date of manufacture when stored in unopened containers at temperatures maintained between 40°F and 90°F (4°C and 32°C) and out of direct sunlight.

**3.1.3 AkroFlex Mesh:** AkroFlex Mesh is an open-weave glass fiber of twisted multi-end strands placed approximately  $\frac{3}{16}$  inch (4.8 mm) on center each way. The mesh weighs approximately 4.5 ounces per square yard (153 g/m<sup>2</sup>).

### 3.2 Surface-burning Characteristics:

When installed in accordance with Section 4.1 with a minimum wet thickness of 20 mils and tested in accordance with ASTM E84, AkroGuard has a flame-spread index less than 25 and a smoke-developed index less than 450.

### 3.3 Air Permeance:

When installed with a minimum wet mil thickness between 10 and 15 mils and tested in accordance with ASTM E2178, AkroGuard has an air leakage rate of less than 0.02 L/(s.m<sup>2</sup>) @ 75 Pa [0.004 cfm/ft<sup>2</sup> @ 0.3 inch w.g. (1.57 psf)].

### 3.4 Water Vapor Transmission:

When AkroGuard is installed with a minimum dry thickness of 12 mils and tested in accordance with the water method of ASTM E96, AkroGuard has a rate of water vapor transmission of 7.64 perms.

### 3.5 Substrates:

AkroGuard is limited to use in applications over the following substrates (sheathing) materials:

- Gypsum sheathing board complying with ASTM C1177 or ASTM C1396.
- Fiber cement panels complying with ASTM C1325.
- Exterior or Exposure 1 wood structural panels complying with U.S. DOC PS-1 or U.S. DOC PS-2.
- Concrete, masonry, and exterior plaster complying with the applicable code.

## 4.0 DESIGN AND INSTALLATION

### 4.1 General:

Installation of the AkroGuard water-resistive barrier coating system must comply with the manufacturer's published installation instructions, this report and the applicable code. In the event of a conflict between the manufacturer's published installation instructions and this report, this report governs. The manufacturer's published installation instructions must be available on the jobsite at all times during installation. Applicators must be approved and listed by Omega Products International, Inc.

The application must occur on clean, dry surfaces, with surface temperatures between 40°F and 120°F (4.4°C and 49°C).

### 4.2 Water-resistive Barrier Coating:

The AkroGuard water-resistive barrier coating system may be applied over the substrates listed in Section 3.5. AkroFill is applied with a trowel over the gaps and openings along the sheathing joints as well as at all inside and outside corners. The total thickness of this coat should be approximately  $\frac{1}{16}$  inch (1.6 mm). AkroFlex Mesh is embedded in wet AkroFill and troweled smooth, ensuring that no mesh is visible. Sheathing joints require 4.5-ounce (1.25 N), minimum 4-inch-wide (102 mm) AkroFlex Mesh. Rough openings require 4.5-ounce (1.25 N), minimum 9.5-inch-wide (241 mm) AkroFlex Mesh. The mesh must be lapped a minimum of 2.5 inches (64 mm) at intersections. AkroFill may also be used to fill holes or surface imperfections of less than  $\frac{1}{16}$  inch (1.6 mm).

AkroFill is allowed to dry prior to the application of AkroGuard. AkroGuard may be applied with a  $\frac{3}{4}$ -inch (19 mm) nap roller or sprayed to form a continuous barrier across the substrate that is approximately 10 to 20 mils thick when wet. Roller application is recommended for all rough surfaces in order to ensure a uniform application. The application should be free of voids, pins, or discontinuities. OSB requires two separate coats of an approximate 10-mil thickness when wet. AkroGuard is allowed to dry prior to application of a second coat, if applicable.

### 4.3 Air Barrier Coating:

Installation as an air barrier must be in accordance with the manufacturer's published installation instructions.

## 5.0 CONDITIONS OF USE

The AkroGuard water-resistive 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:

- The AkroGuard water-resistive coating system must be covered with an approved exterior wall covering.
- The air leakage rate noted in Section 3.2 is for AkroGuard used as an air barrier material only. The design and evaluation of an air barrier assembly, of which AkroGuard is a component, is outside the scope of this report.
- For EIFS applications, special inspections are required at the jobsite in accordance with 2018 and 2015 IBC Section 1705.16.1 (2012 IBC Section 1705.15.1 and 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 2018, 2015 and 2012 IBC Section 1705.1.1 (2009 IBC Section 1704.15). Duties of the inspector include verifying field preparation of materials, expiration dates, installation of components, curing of components, installation of joints and sealants, applied dry-film thickness and interface of coating material with flashings.

## 6.0 EVIDENCE SUBMITTED

- Data in accordance with the ICC-ES Acceptance Criteria for Water-resistive Coatings Used as Water-resistive Barriers over Exterior Sheathing (AC212), dated February 2015 (editorially revised April 2018).

6.2 Reports of air permeability tests in accordance with ASTM E2178.

#### 7.0 IDENTIFICATION

7.1 The AkroGuard, AkroFill, and AkroFlex Mesh described in this report must be identified by a label bearing the manufacturer's name (Omega Products International, Inc.) and address, product name, identification of components, lot or batch number, quantity of material in packages, storage instructions and shelf life, expiration date (when applicable) and the evaluation report number (ESR-3391).

7.2 The report holder's contact information is the following:

**OMEGA PRODUCTS INTERNATIONAL, INC.**  
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**EVALUATION SUBJECT:**

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**1.0 REPORT PURPOSE AND SCOPE****Purpose:**

The purpose of this evaluation report supplement is to indicate that AkroGuard water-resistive coating, described in ICC-ES evaluation report ESR-3391, has also been evaluated for compliance with the code(s) noted below.

**Applicable code edition(s):**

- 2019 and 2016 *California Building Code*® (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) and Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

- 2019 and 2016 *California Residential Code*® (CRC)
- 2019 and 2016 *California Energy Code*® (CEC)

**2.0 CONCLUSIONS****2.1 CBC:**

The AkroGuard water-resistive coating, described in Sections 2.0 through 7.0 of the evaluation report ESR-3391, complies with CBC Chapter 14 provided the design and installation are in accordance with the 2018 and 2015 *International Building Code*® (IBC) provisions noted in the evaluation report. Use as an air barrier must be in accordance with the CEC.

**2.1.1 OSHPD:**

The applicable OSHPD Sections of the CBC are beyond the scope of this supplement.

**2.1.2 DSA:**

The applicable DSA Sections of the CBC are beyond the scope of this supplement.

**2.2 CRC:**

The AkroGuard water-resistive coating, described in Sections 2.0 through 7.0 of the evaluation report ESR-3391, complies with CRC Chapter 7, provided the design and installation are in accordance with the 2018 and 2015 *International Residential Code*® (IRC) provisions noted in the evaluation report. Use as an air barrier must be in accordance with the CEC.

This supplement expires concurrently with the evaluation report, reissued November 2021.