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# ICC-ES Evaluation Report

# ESR-1936

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Reissued 04/2019  
This report is subject to renewal 04/2020.

**DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION**  
**SECTION: 07 24 00—EXTERIOR INSULATION AND FINISH SYSTEMS**

**REPORT HOLDER:**

**ULTRAKOTE PRODUCTS, LLC**

**EVALUATION SUBJECT:**

**ULTRAKOTE WM EIFS; ULTRAKOTE WM-RA EIFS; ULTRAKOTE AND SHURKOTE™  
PB EIFS SYSTEM**



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Reissued April 2019

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## 1.0 EVALUATION SCOPE

### 1.1 Compliance with the following codes:

- 2015, 2012 and 2009 *International Building Code*® (IBC)
- 2015, 2012 and 2009 *International Residential Code*® (IRC)

### Properties evaluated:

PROPERTY	IBC CHAPTER	IRC CHAPTER
Exterior insulation and finish systems (EIFS)	14	R7
Weather resistance	14	R7
Special inspections	17	NA
Structural – transverse wind load resistance	16	R6
Types I – IV (noncombustible) construction (UltraKote and ShurKote™ PB EIFS only)	26	NA
Surface-burning characteristics	26	R3

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

- 2016 California Green Building Standards Code (CALGreen), Title 24, Part 11
- 2015, 2012 and 2008 ICC 700 *National Green Building Standard*™ (ICC 700-2015, ICC 700-2012 and ICC 700-2008)

### Attributes verified:

- See Section 2.0

## 2.0 USES

The Ultrakote and ShurKote™ Wall Systems are exterior insulation and finish systems (EIFS) complying with IBC Section 1408 and IRC Section R703.9.

The UltraKote WM EIFS is a mechanically fastened system complying as EIFS with drainage in accordance with IBC Section 1408.4.1 and IRC Section 703.9 and limited to Type V construction.

The UltraKote WM-RA EIFS is an adhesively applied system complying as EIFS with drainage in accordance with IBC Section 1408.4.1 and IRC Section 703.9 and limited to Type V construction.

The UltraKote and ShurKote™ PB EIFS is not recognized for use on framed walls in a Group R1, R2, R3 and R4 Occupancy under the IBC or Occupancies under the IRC. An exception is where used on masonry or concrete walls of Type V construction under the IBC.

The UltraKote and ShurKote™ PB EIFS fully adhered system recognized in this evaluation report may be used on non-fire-resistance-rated construction in buildings of Types I through IV (noncombustible) construction when the installation is as described in Section 4.5 of this report.

The attributes of the Ultrakote Shurgard RA used as an alternate water-resistive barriers have been verified as conforming to the provisions of (i) CALGreen Section 5.407.1 and (ii) ICC 700-2015 Section 602.1.8, 11.602.1.8 and 12.6.602.1.8; (iii) ICC 700-2012 Section 602.1.8, 11.602.1.8 and 12.5.602.1.8; and (iv) 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 General:

**3.1.1 UltraKote WM EIFS:** The Ultrakote WM EIFS consists of a water-resistive barrier, means of drainage, mechanical fasteners, molded expanded polystyrene (EPS) insulation board, a woven glass fiber mesh; a base coat; and a synthetic plaster finish.

**3.1.2 UltraKote WM-RA EIFS:** The Ultrakote WM-RA EIFS consists of a water-resistive coating, means of drainage, mechanical fasteners, molded expanded

polystyrene (EPS) insulation board, a woven glass fiber mesh; a base coat; and a synthetic plaster finish.

**3.1.3 Ultrakote and ShurKote™ PB EIFS:** The Ultrakote and ShurKote™ PB EIFS consist of either mechanically fasteners or adhesive, molded expanded polystyrene (EPS) insulation board, a woven glass fiber mesh; a base coat; and a synthetic plaster finish.

## 3.2 Materials:

**3.2.1 Adhesive:** There are two adhesives used with the UltraKote and ShurKote™ PB EIFS:

**3.2.1.1 ShurKote™ WB Basecoat/Adhesive:** This is a polymer-reinforced mortar used for adhering insulation boards to substrates, and as a base coat for the system. The material is available as a liquid mixture that is prepared at the jobsite by blending with Type I Portland cement complying with ASTM C150 at a ratio of 1:1 by weight. The liquid mixture is packaged in 50-pound (22.7 kg) pails and has a one-year shelf life when stored at temperatures between 40°F and 100°F (4.4°C and 37.7°C). Working time is limited to a maximum of one hour. Up to one cup (0.12 L) of water per pail is permitted to be added to the liquid mixture, and is used only to adjust the workability.

**3.2.1.2 ShurKote™ DB Basecoat/Adhesive:** This is a dry, cementitious, copolymer material used for adhering insulation boards to substrates, and as a basecoat for the system. The material is packaged in 50-pound (22.7 kg) bags, and is prepared at the jobsite by blending one 50-pound bag (22.7 kg) with 1 gallon (3.8L) of clean potable water. This material has a one-year shelf life when stored at temperatures between 40°F and 100°F (4.4°C and 37.7°C). The working time is approximately 1 hour, and small amounts of water may be added only to adjust workability.

**3.2.2 Mechanical Fasteners:** See Table 2.

**3.2.3 Insulation Board:** The insulation board is to be a molded, rigid expanded polystyrene (EPS) insulation complying with ASTM C578, Type I, having a nominal density of 1.0 pcf (16 kg/m<sup>3</sup>), a flame-spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84 or UL723. The boards have a thickness ranging from <sup>3</sup>/<sub>4</sub> inch to 4 inches (19.1 mm to 102 mm), a maximum width of 24 inches (610 mm) and a maximum length of 48 inches (1219 mm). When used in mechanically attached systems, the EPS boards have a thickness from 1<sup>1</sup>/<sub>2</sub> inches (38 mm) to 4 inches (102 mm) and may have drainage grooves across the width of the back surface of the board. The boards must be recognized in a current ICC-ES evaluation report.

### 3.2.4 Substrates:

- Gypsum sheathing complying with ASTM C1396 or ASTM C1177.
- Exterior or Exposure 1 wood structural panels complying with U.S. DOC PS-1 or U.S. DOC PS-2.
- Concrete or masonry complying with the applicable code.

**3.2.5 Base Coats:** There are two products used as base coats for the system:

**3.2.5.1 ShurKote™ WB Basecoat/Adhesive:** This base coat is described in Section 3.2.1.

**3.2.5.2 ShurKote™ DB Dry Basecoat/Adhesive:** Ultrakote and ShurKote™ DB Dry Basecoat is a dry, cementitious, copolymer material, packaged in 50-pound (22.7 kg) bags, and is prepared at the jobsite by blending

one 50-pound (22.7 kg) bag with 1 gallon (3.8 L) of clean potable water. The working time is approximately 1 hour, and small amounts of water may be added only to adjust workability.

**3.2.6 Reinforcing Mesh:** UltraKote reinforcing mesh is an open-weave, three-coat, glass-fiber fabric made from twisted multi-end strands and treated for compatibility with the other UltraKote and ShurKote materials. The mesh weighs a minimum of 4.5 ounces per square yard (152.6 g/m<sup>2</sup>), with a 12-by-6 thread count.

**3.2.7 Finish Coat:** UltraKote Acrylic Finishes are 100 percent acrylic materials containing quartz sand and marble aggregate. Products differ only in the size of the aggregate used. The products are packaged in 65-pound (29.5 kg) pails and have a one-year shelf life when stored at temperatures between 40°F and 100°F (4.4°C and 37.7°C).

**3.2.8 Water-resistive Barrier:** For the Ultrakote WM EIFS the water-resistive barrier must be one of the following:

**3.2.8.1 Water-resistive Barrier:** No. 15 asphalt-saturated felt complying with IBC Section 1404.2 or IRC Section R703.2.

**3.2.8.2 Tyvek StuccoWrap, DrainWrap or CommercialWrap D:** One layer of Tyvek StuccoWrap<sup>®</sup>-Style 1062X, DrainWrap<sup>™</sup>-Style 1063X or CommercialWrap D<sup>®</sup>-Style 1083X (see ICC-ES [ESR-2375](#)).

**3.2.8.3 Ultrakote Shurgard RA:** This is a single-component elastomeric, fluid-applied coating that is applied as a continuous water-resistive barrier over the wall substrate and is used with the Ultrakote WM-RA EIFS. Shurgard RA uses Ultrakote 4-inch mesh at the perimeter of openings and joints in the substrate. Shurgard RA is packaged in 50-pound (22.7 kg) plastic pails. The coating is applied at a minimum thickness of 12 wet mils using either a roller or airless sprayer. The coating has a one-year shelf life when stored at temperatures between 40°F and 95°F (4.4°C and 35°C).

**3.2.9 Sealants:** Sealants must comply with ASTM C920, Type S or M, minimum Grade NS, minimum Class 25 and Use O.

## 4.0 DESIGN AND INSTALLATION

### 4.1 General:

Installation of UltraKote and ShurKote™ EIFS must comply with this report and the manufacturer's published installation instructions, specifications and details; and the applicable code. These are available at <http://www.ultrakoteproducts.com/ultrakote/uktech-details-wm.html>, [http://www.ultrakoteproducts.com/ultrakote/tech/Specifications%20PDF/020615/Ultrakote-Shurkote%20PB%20EIFS%20Specification%20\(section%20072413\).pdf](http://www.ultrakoteproducts.com/ultrakote/tech/Specifications%20PDF/020615/Ultrakote-Shurkote%20PB%20EIFS%20Specification%20(section%20072413).pdf), [http://www.ultrakoteproducts.com/ultrakote/tech/Specifications%20PDF/020615/Ultrakote%20WM%20EIFS%20Specification%20\(section%20072419\).pdf](http://www.ultrakoteproducts.com/ultrakote/tech/Specifications%20PDF/020615/Ultrakote%20WM%20EIFS%20Specification%20(section%20072419).pdf), <http://www.ultrakoteproducts.com/ultrakote/uk-about-pb.html> and <http://www.ultrakoteproducts.com/ultrakote/uk-about-wm-ra.html>.

### 4.2 Drainage:

**4.2.1 UltraKote WM EIFS – Drainage Options:** The UltraKote WM EIFS has been qualified as an EIFS with drainage, as described in IBC Section 1408.4.1 and IRC

Section R703.9.2, when installed with one of the water-resistive barriers described in Section 4.2.2.1 or 4.2.2.2.

**4.2.1.1 Option 1:** UltraKote™ WM EIFS provides drainage when installed over the water-resistive barrier described in Section 3.2.8.1 through a minimum 1<sup>1</sup>/<sub>2</sub>-inch-thick (38 mm) EPS insulation board with grooves on the back side. The grooves must be a minimum of 3/4-inch (19.1 mm) wide by 1/4-inch (6.4 mm) deep and spaced 6 inches (152 mm) on center.

**4.2.1.2 Option 2:** UltraKote WM EIFS provides drainage when flat EPS board described in Section 3.2.3 is installed over the water-resistive barrier described in Section 3.2.8.2.

**4.2.2 UltraKote WM-RA EIFS:** UltraKote WM-RA EIFS has been qualified as an EIFS with drainage, as described in IBC Section 1408.4.1 and IRC Section R703.9.2, when installed with flat EPS board described in Section 3.2.3 is adhesively attached over the Ultrakote Shurgard RA water-resistive barrier described in Section 3.2.8.3. The adhesive must be applied over the Ultrakote Shurgard RA coating using vertical ribbons of adhesive created by a 3/8-inch-by-3/8-inch-by-1<sup>1</sup>/<sub>2</sub>-inch notched trowel.

**4.2.3 UltraKote and ShurKote™ PB EIFS:** The UltraKote and ShurKote™ PB EIFS has not been qualified as an EIFS with drainage, as described in IBC Section 1408.4.1 and IRC Section R703.9.2.

#### 4.3 Wind Design:

Tables 2 and 3 describe specific assemblies for which test data has been submitted. Other assemblies may be considered for approval by local officials based on testing and/or calculations of a qualified design professional.

#### 4.4 Weather Protection:

UltraKote™ WM EIFS, UltraKote™ WM-RA EIFS and UltraKote and ShurKote™ PB EIFS complies with IBC Section 1403.2 and IRC Section R703.1.1.

#### 4.5 Use in Types I through IV Construction:

Table 4 provides information on UltraKote and ShureKote™ PB assembly used in Types I through IV construction.

#### 4.6 Special Inspection – UltraKote and ShureKote™ PB EIFS:

For recognition under the IBC, special inspections of the UltraKote and ShureKote™ PB EIFS and Ultrakote Shurgard WM-RA EIFS must be conducted in accordance with 2015 IBC Sections 1704.1 and 1704.16 (2012 IBC Sections 1704.1 and 1704.15 and 2009 IBC Sections 1704.1 and 1704.14). Refer to <http://www.ultrakoteproducts.com/ultrakote/tech/Field%20Inspection%20Form%2007272016.pdf> for a manufacturer's inspection form.

### 5.0 CONDITIONS OF USE

The UltraKote and ShurKote™ Wall Systems exterior insulation and finish systems (EIFS) 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 manufacturer's published installation instructions must be available at the jobsite at all times during installation. In the event of a conflict between the manufacturer's installation instructions and this report, this report must govern.

**5.2** The insulation board must be separated from the building interior with a thermal barrier complying with the applicable code, such as 1/2-inch-thick (12.7 mm) gypsum wallboard applied and mechanically fastened in accordance with IBC Section 2603.4 and IRC Section R316.4.

**5.3** The insulation boards must be identified as described in Section 7.0 of this report.

**5.4** Under the IBC, use of the UltraKote and ShureKote™ PB EIFS on framed walls of Occupancy Groups R1, R2, R3 and R4 is not permitted. Under the IBC, use is limited to walls of concrete or masonry construction.

**5.5** The UltraKote and ShurKote PB EIFS may be installed on walls required to be of Types I, II, III, or IV construction under the IBC (defined in Section 4.5) provided there is compliance with Section 4.5 of this report. All other applications are limited to use on non-fire-resistance-rated walls of Type V construction.

**5.6** The design transverse wind load pressure must not exceed the allowable design wind pressures indicated in Tables 2 and 3 of this report.

**5.7** Installation must be by a contractor recognized by UltraKote Products as being trained to perform installation of UltraKote and ShurKote™ Wall Systems.

**5.8** To qualify the adequacy of fasteners in concrete or masonry substrates, a tension-load test program, consisting of fastener withdrawal from the applicable wall(s) of the building(s) at the location in question, shall be implemented. The testing shall be conducted by an approved testing laboratory.

### 6.0 EVIDENCE SUBMITTED

**6.1** Reports of testing in accordance with ASTM E2568 and E2273.

**6.2** Data in accordance with the ICC-ES Acceptance Criteria for Exterior Insulation and Finish Systems (AC219), dated October 2009 (editorially revised November 2014).

**6.3** Data in accordance with the ICC-ES Acceptance Criteria for EIFS Clad Drainage Wall Assemblies (AC235), dated January 2015.

**6.4** 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.

### 7.0 IDENTIFICATION

**7.1** Material containers are identified by the manufacturer's name (UltraKote Products, LLC.) and address, the product name, the shelf life, the evaluation report number (ESR-1936), and the manufacturing code (including date of manufacture). EPS foam plastic insulation boards are identified in accordance with the applicable evaluation report.

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

**ULTRAKOTE PRODUCTS, LLC**  
**327 SOUTH 27<sup>TH</sup> AVENUE**  
**PHOENIX, ARIZONA 85009**  
**(602) 272-5830**  
[www.ultrakoteproducts.com](http://www.ultrakoteproducts.com)

TABLE 1—SYSTEM COMPONENTS

SYSTEM CONFIGURATION	WATER-RESISTIVE BARRIER	DRAINAGE MEDIUM <sup>1</sup>	ATTACHMENT METHOD		EPS MINIMUM THICKNESS (in.)	BASE COATS	FINISH
			Adhesive	Mechanical Fasteners			
UltraKote WM	See Section 4.2.1.1	Grooved or flat insulation board	N/A	Screws and Wind Devil 2 washers <sup>2</sup>	1.5	ShurKote WB ShurKote DB	UltraKote Acrylic Finish
UltraKote WM	See Section 4.2.1.2	N/A	N/A	Screws and Wind Devil 2 washers <sup>2</sup>	1.5		
UltraKote WM-RA	See Section 4.2.2	Vertical ribbons of adhesive	Adhesive	N/A	1		
UltraKote and ShurKote PB EIFS	N/A	N/A	ShurKote WB ShurKote DB	N/A	1		

For SI: 1 inch = 25.4 mm.

<sup>1</sup>See Section 4.2 for a description of drainage mediums.

<sup>2</sup>Fastener details and specifications as described in Table 2.

TABLE 2—WIND LOAD DESIGN FOR ULTRAKOTE™ WM SYSTEM

FRAMING <sup>3</sup>		SUBSTRATE	EPS		ALLOWABLE PRESSURE (psf)
Min.	Spacing o.c (in.)		Min.	Min. Thickness (in.)	
3 <sup>5</sup> / <sub>8</sub> -inch-by No. 18 gage [0.0478 inch] steel	16	7/ <sub>16</sub> -inch-thick OSB or plywood or 5/ <sub>8</sub> -inch-thick, water-resistant core gypsum sheathing, attached per code	1.5	1 <sup>3</sup> / <sub>4</sub> -inch-dia. by 3/ <sub>4</sub> -inch-deep Wind-Devil plates and corrosion-resistant, buglehead, Type S, No. 6 screws spaced 6 inches on center along the framing member <sup>2</sup>	+/- 50
2x4 wood <sup>1</sup>	16				
N/A	N/A	Concrete or masonry	1	1 <sup>3</sup> / <sub>4</sub> -inch-dia. by 3/ <sub>4</sub> -inch-deep Wind-Devil plates and 3/ <sub>16</sub> -inch-dia. Tapcon Concrete Screws manufactured by Illinois Tool Works, Inc., Buildex Division spaced 6 inches on center vertically in rows 16 inches on center. A proof load test program consisting of fastener withdrawal from the wall must be conducted by test lab approved by code official. The average withdrawal strength, in pounds, must be eight times the required fastener load.	Positive – see note 4 32 negative

For SI: 1 inch = 25.4 mm; 1 psf = 0.0479 kPa.

<sup>1</sup>Minimum specific gravity 0.42.

<sup>2</sup>Screws must penetrate a minimum of 1/<sub>4</sub> inch into steel framing or 1 inch into wood framing.

<sup>3</sup>Framing members must be designed to resist all positive and negative transverse design loads with a maximum allowable deflection of 1/<sub>240</sub> of the span.

<sup>4</sup>Maximum positive pressure is limited to the capacity of the concrete or masonry substrate, determined in accordance with the applicable code. Screws must penetrate a minimum of 1/<sub>4</sub> inches into concrete or masonry.

TABLE 3—WIND LOAD DESIGN FOR ULTRAKOTE AND SHURKOTE™ PB SYSTEM AND ULTRAKOTE WM-RA SYSTEM

FRAMING <sup>2</sup>		SUBSTRATE	EPS	ALLOWABLE PRESSURE (psf)
Min.	Spacing o.c (in.)		Min. Thickness (in.)	
3 <sup>5</sup> / <sub>8</sub> -inch-by No. 18 gage [0.0478 inch] steel	16	7/ <sub>16</sub> -inch-thick OSB or plywood or 5/ <sub>8</sub> -inch-thick, water-resistant core gypsum sheathing, attached per code	1	+/- 50
2x4 wood <sup>1</sup>	16			

For SI: 1 inch = 25.4 mm; 1 psf = 0.0479 kPa.

<sup>1</sup>Minimum specific gravity 0.42.

<sup>2</sup>Framing members must be designed to resist all positive and negative transverse design loads with a maximum allowable deflection of 1/<sub>240</sub> of the span.

TABLE 4—ASSEMBLY FOR USE WITH TYPE I, II, III AND IV CONSTRUCTION<sup>1</sup>

FRAMING MEMBERS			INTERIOR SHEATHING			EXTERIOR SHEATHING			INSULATION BOARD THICKNESS MAX. (IN.)	ASSEMBLY
Metal		Max. Spacing o.c. (in.)	Type	Min. Thickness (in.)	Max. Fastener Spacing o.c. (in.)	Type	Min. Thickness (in.)	Max. Fastener Spacing o.c. (in.)		
Min. Depth (in.)	Min. Gage									
3 <sup>5</sup> / <sub>8</sub>	18	16	Type X complying with ASTM C36 or C1396	5 <sup>5</sup> / <sub>8</sub>	6	C1396	5 <sup>5</sup> / <sub>8</sub>	6	4	UltraKote and ShurKote PB EIFS as noted in Table 1, except that the finish coat must be a minimum 1 <sup>1</sup> / <sub>8</sub> -inch thick

For SI: 1 inch = 25.4 mm.

<sup>1</sup>Floor levels must be blocked with 4-inch-thick (102 mm), 4 pcf (64.1 kg/m<sup>3</sup>) mineral fiber insulation