



**ROYAL BUILDING PRODUCTS**  
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## CELECT CELLULAR SIDING

### CSI Section:

07 46 33 Plastic Siding

### 1.0 RECOGNITION

Royal Building Products Celect Cellular Siding products described in this report were evaluated for use as exterior covering materials for walls as part of the weather-resistant exterior wall envelope. The exterior veneer, wind resistance, and installation properties of the Celect Cellular Siding products were evaluated. The siding products are satisfactory alternatives to those prescribed in the following codes:

- 2015, 2012, 2009, and 2006 International Building Code® (IBC)
- 2015, 2012, 2009, and 2006 International Residential Code® (IRC)
- 2017 and 2014 Florida Building Code, Building, and Florida Building Code, Residential – See attached Supplement

### 2.0 LIMITATIONS

Use of the Royal Building Products Celect Cellular Siding recognized in this report is subject to the following limitations:

**2.1** The Siding shall be installed in accordance with the applicable code, the manufacturer’s published installation instructions, and this report. Where there is a conflict, the most restrictive shall govern.

**2.2** Royal Building Products Celect Cellular Siding shall be installed over solid sheathing capable of resisting the design wind pressures.

**2.3** Flashing and water-resistive barrier shall be installed as required by the applicable code.

**2.4** Celect Cellular Siding is manufactured in Bristol, Tennessee.

### 3.0 PRODUCT USE

Celect Cellular Siding is used as an exterior wall covering in accordance with Section 1405 of the IBC and Chapter 7 of the IRC. The siding is for use in Type V Construction under

the IBC and on buildings constructed in accordance with the IRC. Celect Cellular Siding may also be used in Construction Types I to IV when installed in accordance with Section 1406.2 of the IBC.

Royal Building Products Celect Cellular Siding does not reduce the fire-resistance rating of code prescribed 1-hour fire-resistance-rated wall assemblies. The siding has a flame spread index of 25 or less when tested in accordance with ASTM E84.

**3.1 Design:** Design wind pressures shall be determined in accordance with Section 1609 of the IBC or R301.2.1 of the IRC, as applicable, and shall not exceed the allowable pressures tabulated in this report for use of Celect Cellular Siding. The allowable negative wind pressures for Royal Building Products Celect Cellular Siding are shown in Table 1. Allowable positive pressures are dependent on the capacity of the solid sheathing substrate to withstand the positive wind forces.

**3.2 Installation:** Installation of Royal Building Products’ Celect Cellular Siding shall be in accordance with the manufacturer’s published installation instructions, the applicable code and this report. The siding panels shall be installed in accordance with the installation instructions to allow movement of the siding panels due to temperature changes. The panels shall be fastened at the maximum on-center spacing given in Table 1, to minimum 0.42-specific-gravity wood substrate. The fasteners shall be corrosion-resistant roofing nails having minimum 1/8-inch-diameter shanks, 3/8-inch-diameter heads, and shall be minimum 1 1/2 inches long, or equivalent; or corrosion-resistant No.8 truss-head screws minimum 1/4 inches long, or equivalent, as described in Table 1.

### 4.0 PRODUCT DESCRIPTION

Royal Building Products Celect Cellular Siding is an alternative siding to those prescribed in IBC Section 1404.9 and IRC Section R703.11. Celect Cellular Siding is made of polyvinyl chloride (PVC) with an expanded core.

Royal Building Products Celect Cellular Siding is available in 4-inch and 7-inch horizontal clapboard profiles, 7-inch Perfection Shingle shake profile, and 8-inch Board and Batten vertical profile siding. The 7-inch clapboard and 7-inch shake profiles are similar except for the shake texture. The 4-inch clapboard siding is packaged in 12-foot-6-inch (3.81 m) lengths. The 7-inch clapboard siding is packaged in 12-foot-4-inch (3.76 m) lengths. The Perfection Shingle is packaged in panels 48 inches (1.22 m) long. The Board & Batten is packaged in 10-foot (3.05 m) lengths.

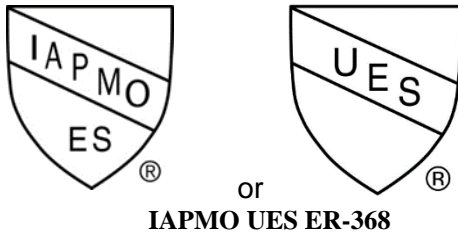
*The product described in this Uniform Evaluation Service (UES) Report has been evaluated as an alternative material, design or method of construction in order to satisfy and comply with the intent of the provision of the code, as noted in this report, and for at least equivalence to that prescribed in the code in quality, strength, effectiveness, fire resistance, durability and safety, as applicable, in accordance with IBC Section 104.11. This document shall only be reproduced in its entirety.*





### 5.0 IDENTIFICATION

A label shall be affixed on the packaging and shall include the Royal Building Products name or trademark, the manufacturer's address, the product model number, the IAPMO Uniform ES Mark of Conformity, and the Evaluation Report Number (ER-368). Either Mark of Conformity may be used as shown below:



### 6.0 SUBSTANTIATING DATA

**6.1** Reports of testing in accordance with ASTM D3679 as required by ICC-ES Acceptance Criteria for Vinyl Siding (AC37), dated February 2014.

**6.2** Data in accordance with ICC-ES Acceptance Criteria for Rigid Cellular PVC Non-load-bearing Exterior Trim (AC227), dated December 2004 (editorially revised June 2012) as follows:

- o Reports of deflection temperature testing in accordance with ASTM D648.
- o Reports of density properties testing in accordance with ASTM D792.
- o Reports of flexural properties testing in accordance with ASTM D790.

**6.3** Reports of ASTM D7254 impact resistance testing in accordance with ICC-ES Acceptance Criteria for Polypropylene Siding (AC366), dated April 2007 (editorially revised April 2011).

**6.4** Reports of wind resistance testing in accordance with ASTM D5206.

**6.5** Reports of testing in accordance with Section 3.3 of ICC-ES AC37, dated February 2014 to determine an alternative pressure equalization factor for this siding product.

**6.6** Reports of ignitability testing in accordance with NFPA 268.

**6.7** Reports of testing in accordance with ASTM E119 and ASTM E84.

**6.8** Quality control documentation.

### 7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research carried out by IAPMO Uniform Evaluation Service on Royal Building Products Celect Cellular Siding to assess its conformance to the codes shown in Section 1.0 of this report and serves as documentation of the product certification. The Decking is manufactured at locations noted in Section 2.4 of this report under a quality control program with periodic inspection under the surveillance of IAPMO UES.

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For additional information about this evaluation report please visit [www.uniform-es.org](http://www.uniform-es.org) or email at [info@uniform-es.org](mailto:info@uniform-es.org)

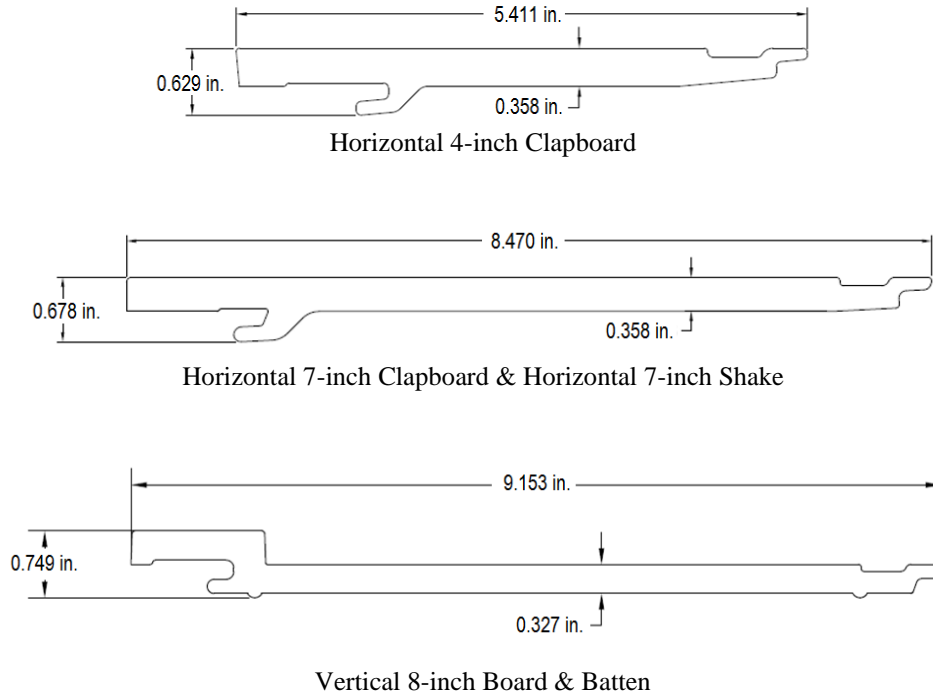


**TABLE 1 – MAXIMUM ALLOWABLE NEGATIVE WIND PRESSURES FOR CELECT CELLULAR SIDING**

Siding Profile	Exposure (in.)	Fastener Type <sup>2</sup>	Spacing (in.)	Attachment Substrate <sup>3</sup>	Allowable Negative Wind Pressures (psf) <sup>1</sup>
Horizontal 7-inch Clapboard	7	1.25" No.8 truss head screws	16	Into Sheathing only	136.8
		1.5" smooth-shank roofing nails	16	Into Sheathing only	72.1
			8	Into Sheathing only	96.2
			16	Through Sheathing into Framing	110.6
Horizontal 4-inch Clapboard	4	1.5" smooth-shank roofing nails	16	Through Sheathing into Framing	196.5
Horizontal 7-inch Shake	7	1.5" smooth-shank roofing nails	16	Through Sheathing into Framing	123.9
Vertical 8-inch Board & Batten	8	1.5" smooth-shank roofing nails	12	Into Sheathing only	96.2

For SI: 1 inch = 25.4 mm, 1 psf = 47.9 N/m<sup>2</sup>

1. Indicates maximum allowable wind pressures for the siding fastened using the fastener types and on-center spacing indicated in the columns above.
2. The roofing nails shall have minimum 3/8-inch-diameter heads, 1/8-inch-diameter shanks, and 1 1/4-inch embedment into the substrate.
3. The attachment substrate shall have specific gravity of 0.42 minimum.



**FIGURE 1 – SIDING PROFILES**



## FLORIDA SUPPLEMENT

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#### 1.0 RECOGNITION

Royal Building Products Celect Cellular Siding Profiles described in IAPMO UES Evaluation Report ER-368 are satisfactory alternatives to the cladding systems prescribed in the following codes:

- 2017 and 2014 Florida Building Code, Building (FBC, Building)
- 2017 and 2014 Florida Building Code, Residential (FBC, Residential)

#### 2.0 LIMITATIONS

Installation shall be in accordance with ER-368, the manufacturer's published installation instructions, and Section 1405 of the FBC, Building or Section R703 of the FBC, Residential, as applicable. Flashing shall comply with Section 1405.4 of the FBC, Building.

For buildings built in accordance with the FBC, Residential, design wind loads for cladding shall be determined in accordance with Tables R301.2(2) and R301.2(3), as required by Section R301.2.1 of the FBC, Residential; when required, conversion between  $V_{ult}$  (Ultimate Design Wind Speed) and  $V_{asd}$  (Nominal Design Wind Speed) shall be in accordance with R301.2.1.3 of the FBC, Residential. For buildings built in accordance with the FBC, Building, design wind loads for cladding shall be determined in accordance with Section 1609.1.1 of the FBC, Building; when required, conversion between  $V_{ult}$  and  $V_{asd}$  shall be in accordance with 1609.3.1 of the FBC, Building. Allowable design pressures determined in accordance with the FBC shall not exceed those in Table 1 of ER-368.

Use of the Royal Building Products Celect Cellular Siding Profiles for compliance with the high-velocity hurricane zone (HVHZ) provisions of the FBC, Building and FBC, Residential has not been evaluated and is outside the scope of this evaluation report.

For products falling under Florida Rule 61G20-3, verification is required that the report holder's quality assurance program is audited by a quality assurance entity, approved by the Florida Building Commission (or the building official when the report holder does not possess an approval by the Commission), to provide oversight and determine that the products are being manufactured as described in this evaluation report to establish continual product performance.

For additional information about this evaluation report please visit [www.uniform-es.org](http://www.uniform-es.org) or email at [info@uniform-es.org](mailto:info@uniform-es.org)