



ROYAL BUILDING PRODUCTS

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ZURI CELLULAR PVC DECKING

CSI Section:

06 53 00 Plastic Decking

1.0 RECOGNITION

Zuri Cellular PVC Decking was evaluated for use as deck boards for exterior balconies, porches, exterior decks, and stair treads. Zuri decking was also evaluated for use as cladding material for walls as part of the weather-resistant exterior wall envelope. The physical, structural, durability, wind-load resistance, installation, and surface burning characteristics of the decking product, used as deck boards or as cladding, are satisfactory alternatives to those prescribed in the following codes:

- 2021, 2018, 2015, 2012, and 2009 International Building Code® (IBC)
- 2021, 2018, 2015, 2012, and 2009 International Residential Code® (IRC)
- 2020 Florida Building Code, (FBC, Building) – attached supplement
- 2020 Florida Building Code, Residential, (FBC, Residential) – attached supplement

2.0 LIMITATIONS

Use of Zuri Cellular PVC Decking recognized in this report is subject to the following limitations:

2.1 Zuri Cellular PVC Decking 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 requirements shall govern.

2.2 Use of the Zuri Decking in a fire-resistance-rated assembly is outside the scope of this report.

2.3 The compatibility of the fasteners, connectors, metal post-mount components, and other hardware with the supporting construction, including preservative-treated wood, is outside the scope of this report. Evidence of compliance with IBC Section 2304.10.5.1 or IRC Section R507.2.3 shall be submitted for approval by the building official.

2.4 The Zuri Decking boards shall be directly fastened to supporting construction. Where required by the building official, engineering calculations and construction documents

consistent with this report shall be submitted for approval. The documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed. The calculations shall verify that the supporting construction complies with the applicable building code requirements and is adequate to resist the design loads imparted upon it from the products and systems described in this report. The documents shall contain details of the attachment to the supporting structure consistent with the requirements of this report.

2.5 Adjustment factors outlined in the ANSI/AWC National Design Specification (NDS) for Wood Construction and applicable codes do not apply to the allowable capacity and maximum spans for the Zuri Cellular PVC Decking.

2.6 The Zuri Decking boards do not contain wood or other cellulosic materials and are decay resistant and termite resistant in accordance with ASTM D7032 and are considered equivalent to preservative-treated or naturally durable wood for termite resistance.

2.7 Zuri Decking, when used as cladding, shall be installed over minimum 2x furring in accordance with Section 3.2.2 of this report, attached to walls capable of resisting the design wind pressures.

2.8 Flashing and water-resistive barriers shall be installed as required by the applicable code.

2.9 Zuri Cellular PVC Decking is produced in Marion, Virginia.

3.0 PRODUCT USE

3.1 Use as deck boards: Zuri Cellular PVC Decking is for exterior use as deck boards for balconies, porches, decks, stair treads, and similar appendages to buildings of Type V-B Construction (IBC) and other types of construction in applications where untreated wood is permitted by IBC Section 1406.3, and buildings constructed in accordance with the IRC.

3.1.1 Design:

3.1.1.1 Structural capacity: The Zuri Decking boards have an allowable capacity of 225 psf (10.8 kN/m²) when installed at a maximum center-to-center spacing of the supporting construction of 16 inches (406 mm). The Zuri Decking boards have a span rating of 100/16. The deflection at the maximum allowable load is no greater than 1/180th of the span.

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.





3.1.1.2 Zuri Decking boards used as stair treads: Zuri Decking boards used as stair treads resist the code-prescribed concentrated load of 300 lbf (1.33 kN) when installed at a perpendicular, center-to-center, maximum spacing of the supporting construction of 12 inches (305 mm). The stair treads shall be installed in a minimum two-span condition.

3.1.2 Installation:

Installation of Zuri Cellular PVC Decking as exterior deck boards and stair treads shall comply with this report, Section 2612 of the IBC, Section R507 of the IRC, and the manufacturer's published installation instructions. The installation instructions provide end-to-end gapping requirements and additional details. The end of each board shall be supported by a joist. When the manufacturer's instructions differ from this report, the more restrictive governs. The manufacturer's published installation instructions shall be available at the job site during installation.

3.1.2.1 Fasteners: Zuri Cellular PVC Decking boards shall be installed on supporting wood members having a minimum specific gravity of 0.50. The minimum edge and end distances for fasteners are 1/4 inch (6.35 mm) and 3/4 inch (19.1 mm), respectively. Zuri Decking may be installed in a variety of manners. Details of these installation methods and required fasteners are found in Section 4.2 and Table 1 of this report.

3.2 Use as Cladding: Zuri Cellular PVC Decking may be used as exterior covering materials for walls as part of the weather-resistant exterior wall envelope. Zuri Decking, used as cladding, shall be used in Type V Construction only under the IBC and any buildings constructed in accordance with the IRC.

3.2.1 Design: Design wind pressures shall be determined in accordance with Section 1609 of the IBC or R301.2 of the IRC, as applicable. The maximum allowable negative wind pressures for Zuri Decking used as cladding shall not exceed 150 psf (7.2 kPa). Allowable positive pressures are dependent on the capacity of the exterior wall to withstand the positive wind forces.

3.2.2 Installation: Installation of Royal Building Products Zuri Decking Grooved Edge profile deck boards, when used as cladding, shall be in accordance with the manufacturer's published installation instructions, the applicable code, and this report. The boards shall be fastened at a maximum spacing of 16 inches on-center to minimum 2x SYP furring using the grooved Zuri hidden fastener system with plastic molded "toe-screw" clips installed using No.8 x 2 1/4-inch screws.

4.0 PRODUCT DESCRIPTION

4.1 Zuri Cellular PVC Decking: Zuri Cellular PVC Decking is a co-extruded cellular PVC board with a photorealistic wood grain pattern and an 0.25 inch thick acrylic capstock layer and complies as plastic lumber in

accordance with ASTM D7032 as referenced in IBC Section 2612 and IRC Section R507.2.2. The boards are manufactured of nominally 1-inch-thick (25.4 mm) by 5 1/2-inch-wide (140 mm) profiles. The Zuri Decking boards are available in lengths of 12, 16, and 20 feet (3.66, 4.88, and 6.1 m, respectively) and in six woodgrain patterns: Chestnut, Brazilia, Walnut, Pecan, Hickory, and Weathered Gray. Zuri Decking boards are available with a square edge profile and with a grooved edge profile (Figures 1 and 2 of this report). The Zuri Decking boards produced with the grooved edge profile are extruded to include a 5/16-inch-deep (7.9 mm), 90° groove running the entire length of the board.

When subjected to weathering, the Zuri Cellular PVC Decking complies as decay-resistant and termite resistant in accordance with IBC Section 2612.4 and IRC Sections R507.2.2.3 and R507.2.2.4 and is equivalent in durability to preservative-treated or naturally durable lumber. The Zuri Cellular PVC Decking does not contain cellulosic fillers. The boards have been evaluated for structural capacity when exposed to temperatures between -20°F (-29°C) and 125°F (52°C).

Zuri Decking boards exhibit a flame spread index not exceeding 200 when tested in accordance with ASTM E84.

4.2 Fasteners:

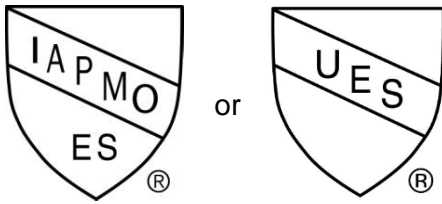
The Zuri Cellular PVC Decking may be installed using one of the following fastening systems in accordance with Table 1 of this report, depending on the type and use of the board.

- Use as deck boards:
 - No. 8 x 2 1/2-inch HEADCOTE Trim Head Stainless Steel Deck Screws
 - No. 7 x 1 7/8-inch 316 Stainless Steel Trimhead CAMO Deck Screws Hidden Deck Fasteners
 - EB-TY Hidden Deck Fastener system - EB-TYS Polypropylene Biscuit installed with No. 7 x 2 1/4-inch stainless steel trim-head screws
- Use as deck boards or siding boards,
 - Zuri Clip hidden fastener system with #8 x 2 1/4 -inch trim head stainless steel screw may be used

All fasteners and fastening systems used in contact with treated wood shall comply with the material requirements in IBC Section 2304.10.5.1 or IRC Section R317.3, as applicable.

5.0 IDENTIFICATION

The Zuri Cellular PVC Decking described in this report is identified by a label, on each individual piece or on the packaging, indicating compliance with ASTM D7032, the allowable loading and maximum allowable spans, the Royal Building Products name, the Zuri name, the IAPMO Uniform ES Mark of Conformity and the Evaluation Report Number (ER-367). The identification includes the IAPMO Uniform Evaluation Service Mark of Conformity. Either Mark of Conformity may be used as follows:



IAPMO UES ER-367

7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research carried out by IAPMO Uniform Evaluation Service on Royal Building Product’s Zuri Cellular PVC Decking to assess conformance to the codes shown in Section 1.0 of this report and serves as documentation of the product certification. The Zuri Decking is manufactured at locations noted in Section 2.9 of this report under a quality control program with periodic inspection under the surveillance of IAPMO UES.

6.0 SUBSTANTIATING DATA

6.1 Data was submitted in accordance with applicable portions of the ICC-ES Acceptance Criteria for Deck Board Span Ratings and Guardrail Systems (Guards and Handrails) (AC174), dated January 2012, editorially revised April 2021.

6.2 Deck Fire Propagation was evaluated based on modified ASTM E108 testing in accordance with ASTM D7032-10a, Appendix A2.

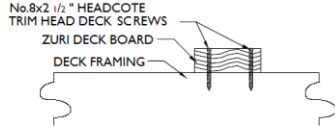
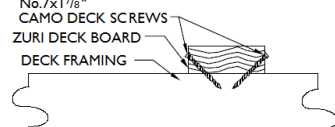
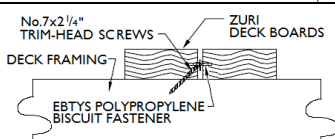
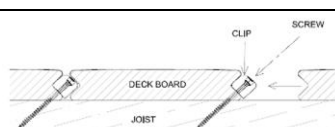
6.3 Wind load resistance was evaluated in accordance with ASTM D5206 testing as referenced in ASTM D3679.

6.4 Rate and extent of burning was evaluated in accordance with ASTM D635 testing.

6.5 Test reports are from laboratories in compliance with ISO/IEC 17025.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org

TABLE 1 – ATTACHMENT METHODS FOR ZURI DECK BOARDS

Deck Board	Attachment Description	Attachment Configuration	Fastener Type	QTY/Board/Joist
Solid and Grooved	Face Screw Attachment		No. 8 x 2 1/2-inch HEADCOTE Trim Head Stainless Steel Deck Screws	2 screws
Solid	CAMO toe-nail type fasteners		No. 7 x 1 7/8-inch 316 Stainless Trimhead CAMO Deck Screws Hidden Deck Fasteners	2 screws
Solid	EB-TY hidden fasteners		EB-TY Hidden Deck Fastener system - EBTYS Polypropylene Biscuit installed with No. 7 x 2 1/4-inch trim-head screws	1 screw
Grooved	Zuri Clip hidden fastener system		Zuri Clip hidden fastener system with #8 x 2 1/4 - inch trim head stainless steel screw	1 screw

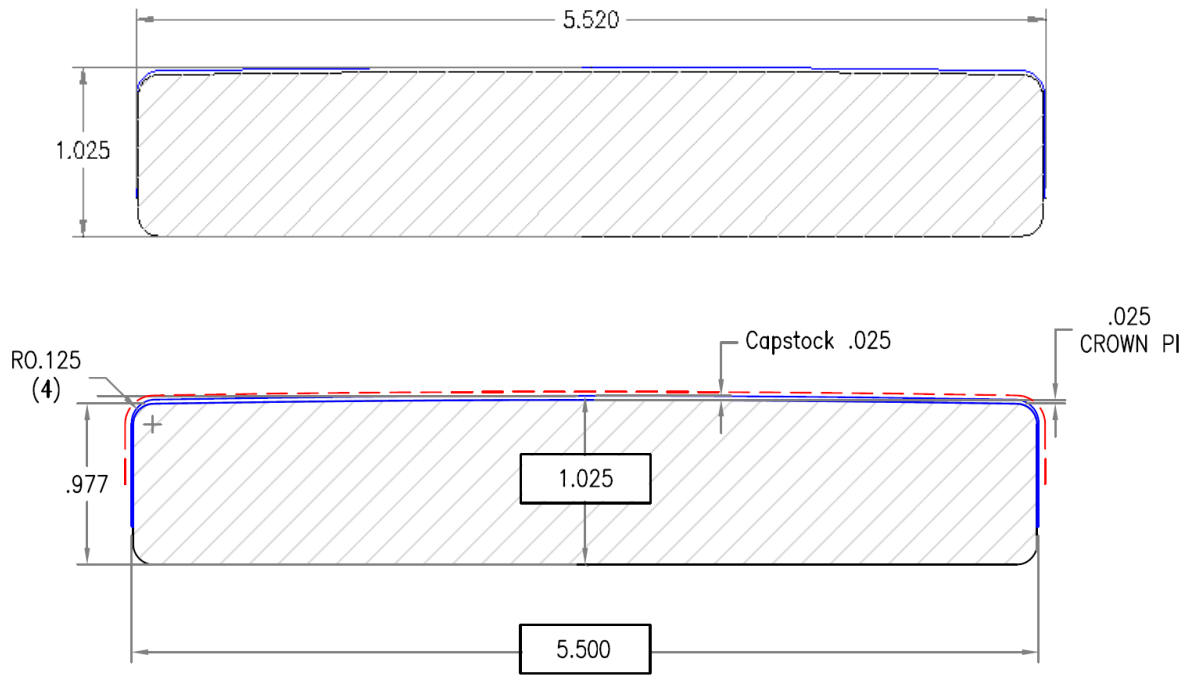


FIGURE 1 – ZURI DECKING BOARD PROFILE

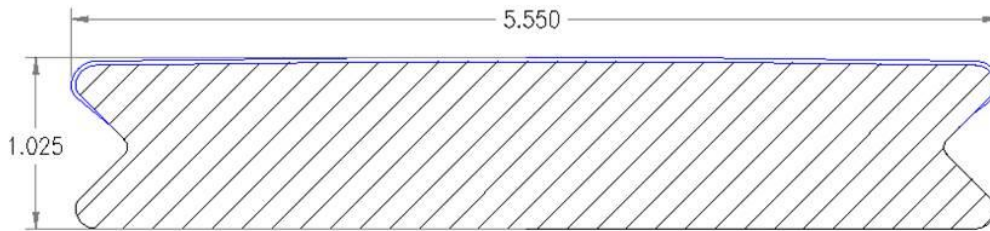


FIGURE 2 – ZURI DECKING BOARD PROFILE (GROOVED EDGE)



FLORIDA SUPPLEMENT

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1.0 RECOGNITION

Zuri Cellular PVC Decking described in IAPMO UES Evaluation Report ER-367 are satisfactory alternatives to the decking and cladding systems prescribed in the following codes:

- 2020 Florida Building Code, Building (FBC, Building)
- 2020 Florida Building Code, Residential (FBC, Residential)

2.0 LIMITATIONS

Installation shall be in accordance with ER-367, the manufacturer's published installation instructions. Installation as cladding shall also comply with 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. Design pressures determined in accordance with the FBC shall not exceed 150 psf (7.2 kPa). Wind load testing was performed in accordance with ASTM D5206, as referenced in ASTM D3679.

Use of the Royal Building Products Zuri Cellular PVC Decking 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 or email at info@uniform-es.org