

# MIAMI-DADE COUNTY PRODUCT CONTROL SECTION

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# DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER) BOARD AND CODE ADMINISTRATION DIVISION

## **NOTICE OF ACCEPTANCE (NOA)**

Westlake Royal Roofing LLC 7575 Irvine Center Drive, Suite 10 Irvine, California 92618

#### SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER -Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

#### **DESCRIPTION:** Villa Concrete Roof Tile

**LABELING:** Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

**RENEWAL** of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

**TERMINATION** of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

**ADVERTISEMENT:** The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

**INSPECTION:** A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA renews NOA# 22-0331.11 and consists of pages 1 through 7. The submitted documentation was reviewed by Alex Tigera.

02/06/25

(MIAMI-DADE COUNTY)
APPROVED

NOA No.: 25-0116.02 Expiration Date: 01/23/30 Approval Date: 02/06/25 Page 1 of 7

### **ROOFING ASSEMBLY APPROVAL**

Category: Roofing
Sub-Category: Roofing Tiles
Material: Concrete

#### 1. SCOPE

This approves a roofing system using Villa Concrete Roof Tile, as manufactured by Westlake Royal Roofing LLC, as described in Section 2 of this Notice of Acceptance. For locations where the pressure requirements, as determined by applicable Building Code does not exceed the design pressure values obtained by calculations in compliance with RAS 127 using the values listed in section 4 herein. The attachment calculations shall be done as a moment based system.

#### 2. PRODUCT DESCRIPTION

| Manufactured by<br>Applicant | <b>Dimensions</b>                                     | Test Specifications | Product<br><u>Description</u>  |
|------------------------------|---|---------------------|--|
| Villa Concrete Roof Tile     | L = 16.5"<br>W = 13.0"<br>H = 2.2"<br>Thickness: .62" | TAS 112             | Low profile, interlocking, concrete tile equipped with two nail holes. For direct deck or battened nail-on, mortar or adhesive set applications. |
| Trim Pieces                  | L= varies<br>W = varies<br>Varying thickness          | TAS 112             | Accessory trim, concrete roof pieces for use at hips, rakes, ridges and valley terminations.  Manufactured for each tile profile.                |

#### 2.1 PRODUCTS MANUFACTURED BY OTHERS

| <u>Product Name</u>                        | <b>Product Description</b>                             | <u>Manufacturer</u><br>(With Current NOA) |
|--|--|---|
| APOC® Polyset® RTA-1 (HFO)                 | Single component polyurethane foam roof tile adhesive. | ICP Construction, Inc.                    |
| TILE BOND <sup>TM</sup> Roof Tile Adhesive | Single component polyurethane foam roof tile adhesive. | DuPont de Nemours, Inc.                   |
| "Tile Tite" Roof Tile Mortar               | Premixed, pre-bagged roof tile mortar.                 | Bermuda Roof Co. Inc.                     |
| Bonsal Roof Tile Mortar                    | Premixed, pre-bagged roof tile mortar.                 | Bonsal American                           |
| "Quikrete" Roof Tile Mortar, FL-15         | Premixed, pre-bagged gray roof tile mortar.            | The Quikrete Companies, Inc.              |

#### 2.2 Manufacturing Location

1. Katy, TX.



NOA No.: 25-0116.02 Expiration Date: 01/23/30 Approval Date: 02/06/25 Page 2 of 7

# 2.3 SUBMITTED EVIDENCE:

| <b>Test Agency</b>                             | <b>Test Identifier</b>         | <b>Test Name/Report</b>                                       | <b>Date</b>   |
|--|--------------------------------|---|---------------|
| Redland Technologies                           | 7161-03                        | PA 102 & PA 102(A)  | Dec. 1991     |
| C  | Appendix III                   |   |               |
|  | 7161-03 Appendix II            | PA 108 (Nail-On)  | Dec. 1991     |
|  | Letter                         | PA 108 (Nail-On)  | Aug. 1994     |
|  | P0631-01                       | PA 108 (Mortar Set)   | July 1994     |
|  | P0402                          | Withdrawal Resistance Testing of screw vs. smooth shank nails | Sept. 1993    |
| The Center for Applied.                        | 94-083                         | PA 101 (Adhesive Set)   | April 1994    |
| Engineering, Inc.                              | 94-084                         | PA 101 (Mortar Set)   | May 1994      |
| <i>C C</i> ,                                   | 25-7094-(1, 4, & 7)            | PA 102  | Oct. 1994     |
|  | 25-7183-(1, 2 & 7)             | PA 102  | Feb. 1995     |
|  | 25-7214-(2 & 6)                | PA 102  | March, 1995   |
|  | 25-7487-1                      | PA 102  | Dec. 1995     |
|  | 25-7496-(2 & 3)                | PA 102  | Dec. 1995     |
|  | 25-7804-5                      | PA 102  | Sep. 1996     |
| Celotex Corporation Testing                    | 528454-2-1                     | PA 101  | Sep. 1998     |
| Service  | 520109-2                       | PA 101  | Dec. 1998     |
| Walker Engineering, Inc.                       | Calculations                   | Aerodynamic Multiplier  | March 1999    |
| -  | <b>Evaluation Calculations</b> | 25-7183   | March 1995    |
|  | <b>Evaluation Calculations</b> | 25-7094   | February 1996 |
|  | <b>Evaluation Calculations</b> | 25-7496   | April 1996    |
|  | <b>Evaluation Calculations</b> | 25-7584   | December 1996 |
|  | <b>Evaluation Calculations</b> | 25-7804b-8  | December 1996 |
|  | <b>Evaluation Calculations</b> | 25-7804-4 & 5   | December 1996 |
|  | <b>Evaluation Calculations</b> | 25-7848-6   | December 1996 |
|  | <b>Evaluation Calculations</b> | Aerodynamic Multipliers                                       | April 1999    |
|  | Evaluation Calculations        | Two Paddy Adhesive Set System                                 | April 1999    |
| American Test Lab of South                     | RT0806.01-19                   | TAS 112   | 08/09/19      |
| Florida  | RT0502.03-24                   | TAS 112   | 05/15/24      |
| PRI Construction Materials<br>Technologies LLC | Calculations                   | Restoring Moment<br>Aerodynamic Multiplier                    | 09/04/19      |



NOA No.: 25-0116.02 Expiration Date: 01/23/30 Approval Date: 02/06/25 Page 3 of 7

#### 3. **LIMITATIONS**

- 3.1 Fire classification is not part of this acceptance.
- For mortar or adhesive set tile applications, a static field uplift test shall be performed in accordance with 3.2 TAS 106.
- 3.3 Applicant shall retain the services of a Miami-Dade County Certified Laboratory to perform quarterly test in accordance with TAS 112, appendix 'A'. Such testing shall be submitted to the Miami-Dade Product Control office for review.
- 3.4 Minimum underlayment shall be in compliance with the applicable Roofing Applications Standards listed section 4.1 herein.
- 3.5 30/90 hot mopped underlayment applications may be installed perpendicular to the roof slope unless stated otherwise by the underlayment material manufacturers published literature.
- This acceptance is for wood deck applications. Minimum deck requirements shall be in compliance with 3.6 applicable building code.
- All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code 3.7 and Rule 61G20-3 of the Florida Administrative Code.

#### 4. **INSTALLATION**

- Villa Concrete Roof Tile and its components shall be installed in strict compliance with Roofing Application Standard RAS 118, RAS 119, and RAS 120.
- **Data For Attachment Calculations** 4.2

| Table 1: Average Weight (W) and Dimensions (I x w )    |      |      |      |  |  |
|--|------|------|------|--|--|
| Tile Profile Weight-W (lbf) Length-I (ft) Width-w (ft) |      |      |      |  |  |
| Villa Concrete Roof Tile                               | 10.4 | 1.38 | 1.08 |  |  |

| Table 2: Aerodynamic Multipliers - λ (ft³) |                               |                                    |  |  |
|--|-------------------------------|------------------------------------|--|--|
| Tile Profile                               | λ (ft³)<br>Batten Application | λ (ft³)<br>Direct Deck Application |  |  |
| Villa Concrete Roof Tile                   | 0.272                         | 0.295                              |  |  |

| Table 3: Restoring Moments due to Gravity - Mg (ft-lbf) |         |                |         |                |         |                      |         |                |         |                |         |                |
|---|---------|----------------|---------|----------------|---------|----------------------|---------|----------------|---------|----------------|---------|----------------|
| Tile<br>Profile   |         |                |         | 6":12"         |         | 7":12" or<br>greater |         |                |         |                |         |                |
| Villa<br>Concrete                                       | Battens | Direct<br>Deck | Battens | Direct<br>Deck | Battens | Direct<br>Deck       | Battens | Direct<br>Deck | Battens | Direct<br>Deck | Battens | Direct<br>Deck |
| Roof Tile   | N/A     | 6.99           | N/A     | 6.91           | 6.80    | 6.80                 | 6.65    | 6.65           | 6.48    | 6.48           | 6.30    | 6.30           |



NOA No.: 25-0116.02 Expiration Date: 01/23/30 Approval Date: 02/06/25

Page 4 of 7

| Table 4: Attachment Resistance Expressed as a Moment - M <sub>f</sub> (ft-lbf) for Mechanically Attached Systems |   |  |   |         |  |
|--|---|--|---|---------|--|
| Tile<br>Profile  | Fastener Type                                     | Direct Deck<br>(min 15/32"<br>plywood) | Direct Deck<br>(min. 19/32"<br>plywood) | Battens |  |
| Villa Concrete Roof Tile   | 2-10d Ring Shank Nails                            | 27.8                                   | 37.4                                    | 28.8    |  |
|  | 1-10d Smooth or Screw Shank Nail                  | 8.8                                    | 11.8                                    | 4.1     |  |
|  | 2-10d Smooth or Screw Shank Nails                 | 16.4                                   | 21.9                                    | 7.1     |  |
|  | 1 #8 Screw  | 25.8                                   | 25.8                                    | 22.9    |  |
|  | 2 #8 Screw  | 47.1                                   | 47.1                                    | 49.1    |  |
|  | 1-10d Smooth or Screw Shank Nail<br>(Field Clip)  | 24.3                                   | 24.3                                    | 24.2    |  |
|  | 1-10d Smooth or Screw Shank Nail<br>(Eave Clip)   | 19.0                                   | 19.0                                    | 22.1    |  |
|  | 2-10d Smooth or Screw Shank Nails<br>(Field Clip) | 35.5                                   | 35.5                                    | 34.8    |  |
|  | 2-10d Smooth or Screw Shank Nails<br>(Eave Clip)  | 31.9                                   | 31.9                                    | 32.2    |  |
|  |   |  |   |         |  |
|  | 2-10d Ring Shank Nails <sup>1</sup>               | 43.0                                   | 67.5                                    | 50.9    |  |
| 1 Installation with a 4" t   | le headlap and fasteners are located a m          | in. of 2½" from hea                    | ad of tile.                             |         |  |

| Table 5: Attachment Resistance Expressed as a Moment M <sub>f</sub> (ftlbf) for Two Patty Adhesive <sup>2</sup> Set Systems |                 |                          |                                     |  |  |
|---|-----------------|--------------------------|-------------------------------------|--|--|
| Tile Profile: Villa Concrete Roof Tile  |                 |                          |                                     |  |  |
| Tile Application  | Paddy weight    | Adhesive<br>Contact Area | Minimum<br>Attachment<br>Resistance |  |  |
| TILE BOND™ Roof Tile Adhesive – (Independent)   | 11.4 grams each | -                        | 26.1                                |  |  |
| APOC® Polyset® AH-160 (HFO1) 8 grams each - 26.1  |                 |                          |                                     |  |  |
| See manufacturer component approval for installation requirements.  |                 |                          |                                     |  |  |

| Table 6: Attachment Resistance Expressed as a Moment - M <sub>f</sub> (ft-lbf) for Single Patty Adhesive <sup>3</sup> Set Systems |                                       |                          |                                     |  |  |
|---|---------------------------------------|--------------------------|-------------------------------------|--|--|
| Tile Profile: Villa 900 Concrete Tile   | Tile Profile: Villa 900 Concrete Tile |                          |                                     |  |  |
| Tile Application  | Paddy weight                          | Adhesive<br>Contact Area | Minimum<br>Attachment<br>Resistance |  |  |
| APOC® Polyset® AH-160 (HFO1)  | 54 grams each                         | -                        | 87                                  |  |  |
| APOC® Polyset® AH-160 (HFO1) 24 grams each - 46   |                                       |                          |                                     |  |  |
| 3 See manufacturer component approval for installation requirements.  |                                       |                          |                                     |  |  |



NOA No.: 25-0116.02 Expiration Date: 01/23/30 Approval Date: 02/06/25 Page 5 of 7

| Table 7: Attachment Resistance Expressed as a Moment - M <sub>f</sub> (ft-lbf) for Mortar Set Systems |  |  |  |  |
|---|--|--|--|--|
| Tile Tile Attachment Profile Application Resistance   |  |  |  |  |
| Villa Concrete Roof Tile Mortar Set <sup>4</sup> 20.6   |  |  |  |  |
| 4 See specific mortar manufacturer's Notice of Acceptance   |  |  |  |  |

### 5. LABELING

All tiles shall bear the imprint or identifiable marking of the manufacturer's name or logo (See Detail Below), or following statement: "Miami-Dade County Product Control Approved".



VILLA LOW PROFILE TILE LOGO (LOCATED ON UNDERSIDE OF TILE)

# **BUILDING PERMIT REQUIREMENTS:**

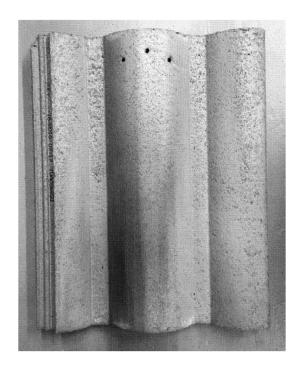
- **6.1** Application for building permit shall be accompanied by copies of the following:
  - 6.1.1 This Notice of Acceptance.
  - 6.1.2 Any other documents required by Building Official or Applicable building code in order to properly evaluate the installation of this system.



NOA No.: 25-0116.02 **Expiration Date: 01/23/30** Approval Date: 02/06/25

Page 6 of 7

## TILE PROFILE





VILLA CONCRETE ROOF TILE

# END OF THIS ACCEPTANCE



NOA No.: 25-0116.02 Expiration Date: 01/23/30 Approval Date: 02/06/25 Page 7 of 7