CBUCK Engineering

Specialty Structural Engineering

CBUCK, Inc. Certificate of Authorization #8064

Evaluation Report

"Top Notch"

Roof Underlayment

Manufacturer:

Ridged Systems LLC

1455 SW 4th Avenue Delray Beach, Florida 33444 (561) 276-9745

for

Florida Product Approval

FL 8095.2 R3

Florida Building Code 5th Edition (2014)

Method: 1 - D
Category: Roofing

Sub - Category: Roofing Accessories that are an Integral

Part of the Roofing System

Product Name: "Top Notch"

Product Description: Ridge Member for Roof Tile

Product Height: 2.5 in.

Prepared by:

James L. Buckner, P.E., SECB Florida Professional Engineer # 31242 Florida Evaluation ANE ID: 1916 Project Manager: Diana Galloway Report No. 15-111-TN-2.5-ER

(Revises 11-211-TN-2.5-ER) Date: 4 / 02 / 15

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Manufacturer: Ridged Systems LLC

Product Name: Top Notch

Product Category: Roofing

Product Sub-Category Roofing Accessories that are an Integral part of the Roofing System

Compliance Method: State Product Approval Rule 61G20-3.005 (1) (d)

Product Description: Ridge Member for Roof Tile made of High Density Polyethylene (HDPE).

Product Assembly as Evaluated:

Refer to Page 4 of this report for product assembly components/materials & standards:

Ridge Roof Tile
 Roof Tile Adhesive

3. Top Notch Ridge member

4. Underlayment

Support: Type:

Wood Deck

(Design of support system is outside the scope of this evaluation.)

Description:

15/32 or greater plywood,

• or Wood plank (min. specific gravity of 0.42)

Performance: Wind Uplift Resistance:

• Design Uplift Pressure*: Concrete Tile: - 146 PSF

Clay Tile: - 125 PSF

* Allowable design pressure(s) for allowable stress design (ASD).



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Performance Standards:

The product described herein has demonstrated compliance with:

- SBCCI SSTD 11-97 Test Standard for Determining Wind Resistance of Concrete or Clay Roof Tiles
- ASTM D 1929-96 Standard test Method for Ignition Properties of Plastics
- ASTM E 635-98 Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position

Standards Equivalency:

The ASTM D 635-98 standard version used to test the product meets the prescribed standards in ASTM D 635-06 standard version adopted by the Florida Building Code 5th Edition (2014) for use as evaluated in this report.

Evaluation Report Scope:

This product evaluation is limited to compliance with the structural requirements of the Florida Building Code, as related to the scope section to Florida Product Approval Rule 61G20-3.001.

Limitations and Conditions of Use:

• Scope of "Limitations and Conditions of Use" for this evaluation:

This evaluation report for "Optional Statewide Approval" contains technical documentation, specifications and installation method(s) which include "Limitations and Conditions of Use" throughout the report in accordance with Rule 61G20-3.005. Per Rule 61G20-3.004, the Florida Building Commission is the authority to approve products under "Optional Statewide Approval".

• Option for application outside "Limitations and Conditions of Use"

Rule 61G20-3.005(1)(e) allows engineering analysis for "project specific approval by the local authorities having jurisdiction in accordance with the alternate methods and materials authorized in the Code". Any modification of the product as evaluated in this report and approved by the Florida Building Commission is outside the scope of this evaluation and will be the responsibility of others.

- Design of support system is outside the scope of this report.
- Fire Classification is outside the scope of Rule 61G20-3, and is therefore not included in this evaluation.
- This evaluation report does not evaluate the use of this product for use in the High Velocity Hurricane Zone code section. (Dade & Broward Counties)

Quality Assurance:

The manufacturer has demonstrated compliance of roof panel products in accordance with the Florida Building Code and Rule 61G20-3.0005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity through Keystone Certifications, Inc., (FBC Organization #QUA ID:1824)



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Components/Materials (by Manufacturer):

Ridge Roof Tile Option 1:

Material: Concrete

Standard: Material shall comply with ASTM C 1492 per Florida Building Code 5th

Edition (2014), Section 1507.3.5.

Ridge Roof Tile Option 2:

Material: Clay

Standard: Material shall comply with ASTM C 1167 per Florida Building Code 5th

Edition (2014), Section 1507.3.4.

Roof Tile Adhesive:

Product Name: Polypro® AH-160
Manufactured By: Polyfoam Products, Inc.

"Top Notch" Ridge Member

Material: High Density Polyethylene (HDPE)

Polymer Type: Thermoplastic Physical Properties Standard: ASTM D 638

Tensile Stress: 23 MPa (minimum)

Typical Properties Results Test Method Weight Per Gallon 10 – 12 lbs ASTM D 2583

Type: 34

Underlayment:

Per roofing manufacturer's guidelines in compliance with FBC Section 1507.3.3.

Installation:

Installation Method:

(Refer to drawing on Page 6 of this evaluation report.)

1. Roof adhesive

Average paddy weight: 32 grams per foot minimum.

A continuous strip paddy placement of Polyfoam Polypro AH-160 roof tile adhesive shall be applied along the underlayment.

2. "Top Notch" Ridge Member

Install the "Top Notch" Ridge Member into the continuous strip paddy of Polyfoam Polypro AH-160 Adhesive.

3. Roof adhesive

Average paddy weight: 32 grams per foot minimum.

A continuous strip paddy placement of Polyfoam Polypro AH-160 roof tile adhesive shall be applied along the top length of the "Top Notch" Ridge Member.

4. Concrete or Clay Ridge Tile

Attach the ridge tile to the "Top Notch" Ridge Member with patty placement starting at the head beneath the watercourse area of the tile and extending along the length of the member.

Install the ridge tile assembly in compliance with the installation method listed in this report and applicable code sections of Florida Building Code 5th Edition (2014). The installation method described herein is in accordance with the scope of this evaluation report. Refer to manufacturer's installation instructions as a supplemental guide for attachment.



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Referenced Data:

SBCCI SSTD 11-97 Uplift Test
 By PRI Asphalt Technologies (FBC Organization #TST ID: 1679)
 Report #: TGRI-001-02-03, Dated: 9/29/06

2. SBCCI SSTD 11-97 Uplift Test

By PRI Asphalt Technologies (FBC Organization #TST ID: 1679)

Report #: TGRI-001-02-04, Dated: 9/29/06

3. ASTM D 1929-96 & ASTM D 635-98 Tests ETC Laboratories (FBC Organization #TST ID: 2411) Report # ETC-08-718-20993.0, Dated 5/09/08

Equivalency of Test Standard Certification
 By James L. Buckner, P.E. @ CBUCK Engineering
 (FBC Organization # ANE 1916)

5. Quality Assurance

By Keystone Certifications, Inc., (FBC Organization #QUA ID:1824) Ridged Systems, LLC, Licensee #: 448

Engineering Analysis
 By CBUCK Engineering (FBC Organization # ANE 1916)

7. Certification of Independence By James L. Buckner, P.E. @ CBUCK Engineering (ANE ID: 1916)



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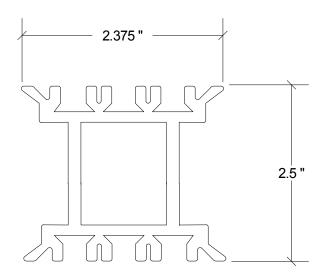
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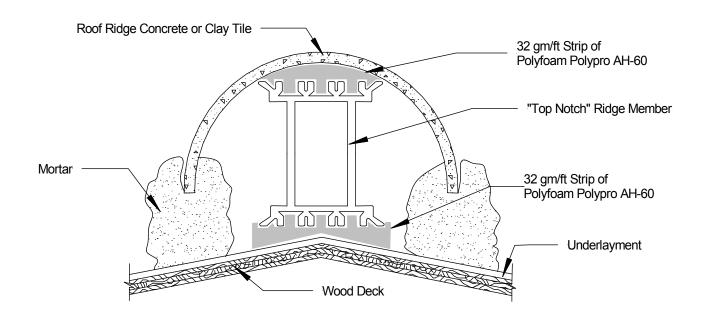
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Installation Method Ridged Systems LLC "Top Notch" Tile Ridge Member



"Top Notch"
Typical Profile View



Typical Assembly View