



EVALUATION REPORT

FLORIDA BUILDING CODE, 6TH EDITION (2017)

Manufacturer: GLOBAL INNOVATION, LLC
496 SW Ring Court
Lake City, FL 32025
(877) 784-2824
www.endureed.com

Issued July 2, 2018

Manufacturing: Lake City, FL

Quality Assurance: PRI Construction Materials Technologies (QUA9110)

SCOPE

Category: Roofing
Subcategory: Roofing Accessories that are an Integral Part of the Roofing System
Code Sections: 1504.3.1
Properties: Wind Resistance

REFERENCES

<u>Entity</u>	<u>Report No.</u>	<u>Standard</u>	<u>Year</u>
PRI Construction Materials Technologies (TST5878)	CCR-008-02-01	ASTM D 3161	2016
		TAS 107	1995
PRI Construction Materials Technologies (TST5878)	CCR-009-02-01A	UL 1897	2012
PRI Construction Materials Technologies (TST5878)	CCR-009-02-01B	UL 1897	2012
PRI Construction Materials Technologies (TST5878)	CCR-010-02-01A	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	CCR-010-02-01B	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	CCR-011-02-01	ASTM 3161	2016
		TAS 107	1995
PRI Construction Materials Technologies (TST5878)	CCR-012-02-01	ASTM D 3462	2010A
		ASTM D 882	2012
PRI Construction Materials Technologies (TST5878)	CCR-015-02-01	UL 1897	2012
PRI Construction Materials Technologies (TST5878)	CCR-015-02-02	TAS 100	1995
TrinityJERD	S35000.12.10-R16	ASTM D 6163	2000(2008)

LIMITATIONS

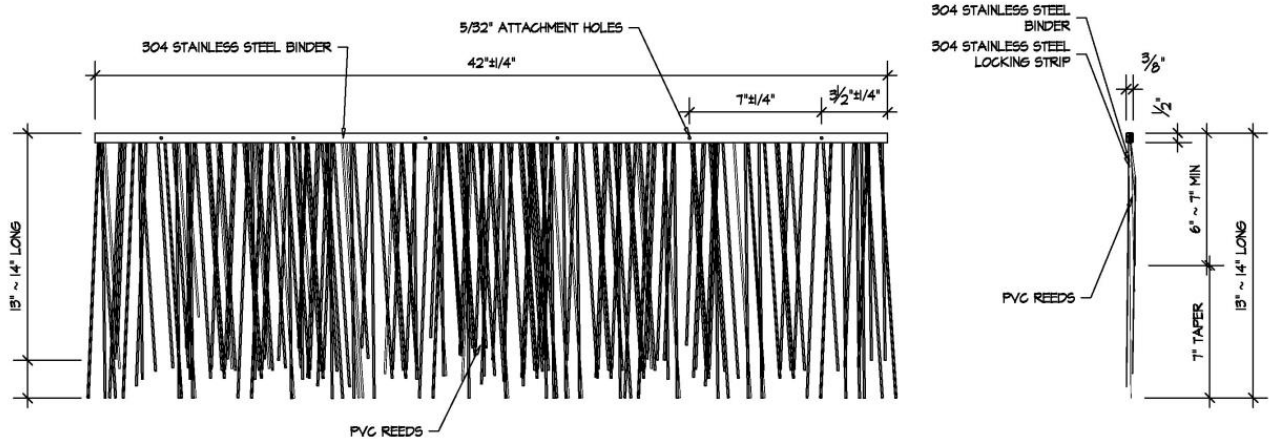
1. This evaluation report is not for use in the HVHZ.
2. Fire classification is not within the scope of this evaluation.
3. The roof deck and the roof deck attachment shall be designed by others to meet the minimum design loads established for components and cladding and in accordance with FBC requirements.
4. The roof system shall not be installed over an existing roof.
5. Installation of the evaluated products shall comply with this report, the FBC, and the manufacturer's published application instructions. Where discrepancies exist between these sources, the more restrictive and FBC compliant installation detail shall prevail.
6. Quality Assurance for SOPREMA modified bituminous roofing products is provided under FL3915.
7. All products listed in this report shall be manufactured under a quality assurance program in compliance with Rule 61G20-3.



PRODUCT DESCRIPTION

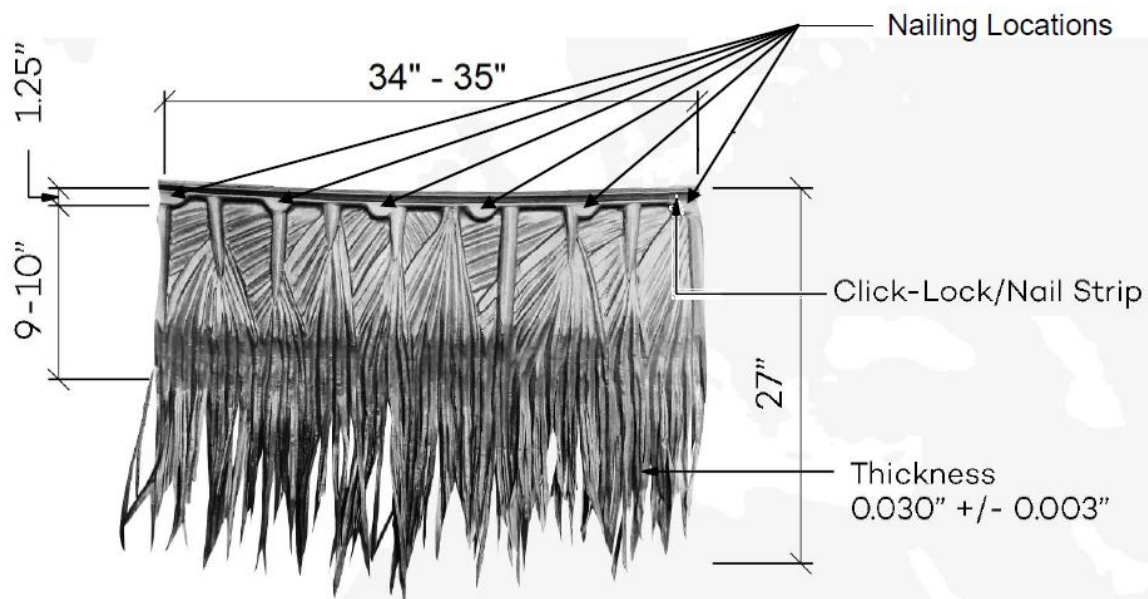
Endureed – Regions (RFMB 2000)

Profile: Synthetic thatch shingle;
Description: 42 in. width x 14-15 in. tall, 6.5 to 8 in. headlap; Panels abutted end-to-end
Material: PVC reeds bound by 23 ga. grade 304 stainless steel binder strip



Endureed – Viva (TFSC 0014)

Profile: Synthetic thatch shingle
Description: 34-35 in. width x 25-27 in. tall, 7.5 in. headlap; Minimum 2.5 in. side lap;
Material: Synthetic palm thatch comprised of composite HDPE





APPROVED ASSEMBLIES

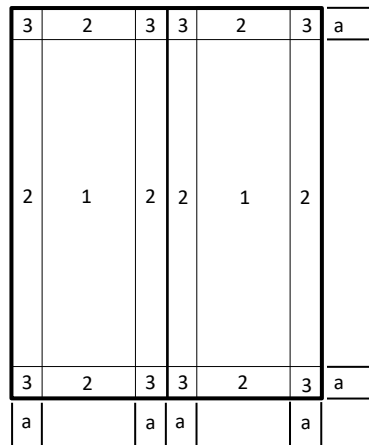
System 1 – Endureed - Regions									
Slope:		2:12 or greater							
Roof Deck:		Solid or closely fitted min. 15/32 in. plywood sheathing for new and existing construction at max. 24 in. span; Designed by others in accordance with FBC requirements.							
Roof Covering:		SOPREMA Elastophene Stick HR FR GR shall be applied direct to plywood deck in accordance with the manufacturer's installation instructions.							
Surfacing:		Endureed "Region" synthetic thatch shingles shall be installed by fastening with four (4) to seven (7) 11 ga. x 1.75 in. stainless steel ring shank roofing nails per panel. The nails shall be placed in the predrilled holes at either end of each binder and spaced between the end nails as evenly as possible.							
Maximum Design Pressures:		-82.5 psf <i>Pressure calculated using 2:1 margin of safety per 1504.9</i>							
Maximum Mean Roof Heights for Gable/Hip Roofs Slopes 2:12 – 6.1:12									
Exposure	⁹ Basic Wind Speed (mph)								
	120	130	140	150	160	170	180	190	200
Zone 1 – Field									
B	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft
C	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft
D	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft
Zone 2 – Perimeter									
B	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	50 ft
C	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	30 ft	20 ft	NA
D	60 ft	60 ft	60 ft	60 ft	60 ft	30 ft	15 ft	NA	NA
Zone 3 – Corner									
B	60 ft	60 ft	60 ft	60 ft	60 ft	40 ft	30 ft	NA	NA
C	60 ft	60 ft	60 ft	30 ft	15 ft	NA	NA	NA	NA
D	60 ft	60 ft	30 ft	NA	NA	NA	NA	NA	NA
Notes:	1) Exposure category for the structure location shall be as defined in the Florida Building Code 2) Limitations are based on the exposed area of 10ft ² or less 3) Topographic factors such as escarpments or hills are not included in the above assessment 4) Applicable for Enclosed Buildings without overhangs 5) NA = "Not Allowed" 6) $K_d = 0.85$ 7) Projects with mean roof heights of greater than 60 ft shall be evaluated by a licensed design professional 8) See page 5 for details for dimensions and locales of Zone 1, 2, and 3 9) V_{ult} is shown in the above table. Design pressures are calculated using $V_{asd} = V_{ult}\sqrt{0.6}$ per 1609.3.1. 10) For Hip roofs between 2:12 and 5.6:12, Zone 3 shall be treated as Zone 2.								



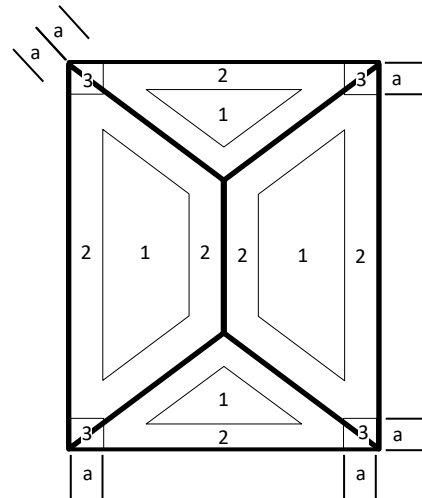
System 2 – Endureed - Viva									
Slope:	2:12 or greater								
Roof Deck:	Solid or closely fitted min. 15/32 in. plywood sheathing for new and existing construction at max. 24 in. span; Designed by others in accordance with FBC requirements.								
Roof Covering:	SOPREMA Elastophene Stick HR FR GR shall be applied direct to plywood deck in accordance with the manufacturer’s installation instructions.								
Surfacing:	Endureed “Viva” synthetic thatch shingles shall be installed by fastening with six (6) 0.120 in. x 1.25 in. stainless steel ring shank roofing nails approximately 8-inch o.c. The nails shall be placed in the premolded nail locations.								
Maximum Design Pressures:	-97.5 psf <i>Pressure calculated using 2:1 margin of safety per 1504.9</i>								
Maximum Mean Roof Heights for Gable/Hip Roofs Slopes 2:12 – 6.1:12									
Exposure	⁹ Basic Wind Speed (mph)								
	120	130	140	150	160	170	180	190	200
Zone 1 – Field									
B	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft
C	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft
D	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft
Zone 2 – Perimeter									
B	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft
C	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	52 ft	31 ft
D	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	40 ft	22 ft	NA
Zone 3 – Corner									
B	60 ft	60 ft	60 ft	60 ft	60 ft	60 ft	52 ft	36 ft	NA
C	60 ft	60 ft	60 ft	60 ft	40 ft	22 ft	NA	NA	NA
D	60 ft	60 ft	60 ft	35 ft	19 ft	NA	NA	NA	NA
Notes:	1) Exposure category for the structure location shall be as defined in the Florida Building Code 2) Limitations are based on the exposed area of 10ft ² or less 3) Topographic factors such as escarpments or hills are not included in the above assessment 4) Applicable for Enclosed Buildings without overhangs 5) NA = “Not Allowed” 6) $K_d = 0.85$ 7) Projects with mean roof heights of greater than 60 ft shall be evaluated by a licensed design professional 8) See page 5 for details for dimensions and locales of Zone 1, 2, and 3 9) V_{ult} is shown in the above table. Design pressures are calculated using $V_{asd} = V_{ult}\sqrt{0.6}$ per 1609.3.1. 10) For Hip roofs between 2:12 and 5.6:12, Zone 3 shall be treated as Zone 2.								



Gable



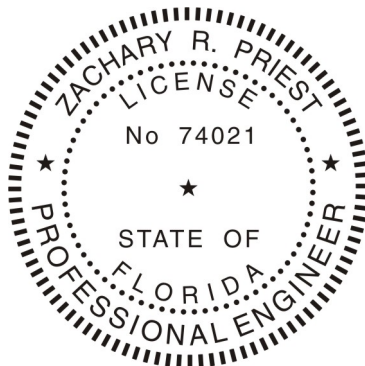
Hip



Zones 1, 2, and 3 shall be defined as shown above. Dimension "a" shall be 10% of the least horizontal dimension or (0.4 x Mean Roof Height), whichever is smaller, but not less than either 4% of the least horizontal dimension or 3ft.

COMPLIANCE STATEMENT

The products evaluated herein by Zachary R. Priest, P.E. have demonstrated compliance with the Florida Building Code, 6th Edition (2017) as evidenced in the referenced documents submitted by the named manufacturer.



Zachary R. Priest, P.E.
Florida Registration No. 74021
Organization No. ANE9641

CERTIFICATION OF INDEPENDENCE

CREEK Technical Services, LLC does not have, nor will it acquire, a financial interest in any company manufacturing or distributing products under this evaluation.

CREEK Technical Services, LLC is not owned, operated, or controlled by any company manufacturing or distributing products under this evaluation.

Zachary R. Priest, P.E. does not have, nor will acquire, a financial interest in any company manufacturing or distributing products under this evaluation.

Zachary R. Priest, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.

END OF REPORT