



**Evaluation of
Country Cottage Roofing
Endureed
Artificial Thatch Roofing System
in Accordance With
Florida Building Code Test Protocol TAS 100-95
TEST PROCEDURE FOR WIND AND WIND DRIVEN RAIN
RESISTANCE OF DISCONTINUOUS ROOF SYSTEMS**

Metro-Dade Notification Number: PRI03126

December 11, 2003

TEST REPORT

FLORIDA BUILDING CODE TEST PROTOCOL TAS 100-95

TEST PROCEDURE FOR WIND AND WIND DRIVEN RAIN RESISTANCE OF DISCONTINUOUS ROOF SYSTEMS

December 11, 2003

Client: Country Cottage Roofing, Inc.
Route 10
Box 596
Lake City, FL 32025

Metro-Dade Notification No: PRI03126
Test Date: December 4, 2003
PRI Test No: CCR-003-02-01

1.1 Description of Discontinuous Roof System:

Prepared Roof Covering

Product Name: Endureed
Product Dimensions: $\frac{5}{16}$ x 14 x 36 inches long
Product Type: Artificial Thatch Roofing System
Manufacturer: Country Cottage Roofing

Underlayment

Name: Soprema® Colphene 1500 modified membrane
Soprema® HR/FR Granulated membrane
Manufacturer: Soprema, Inc. 800.356.3521
Type: UL Rated, Self-Adhering Roofing Membrane

Fire Barrier

Name: Dens-Deck® (1/4 inch thick)
Manufacturer: Georgia-Pacific GP Gypsum - Products
Type: Non-structural, glass-mat faced, gypsum panel

Other Materials:

Nails: Stainless Steel Annular Ring Shank,
10-gauge 2 X $\frac{3}{8}$ inch
Galvanized Annular Ring Shank,
11 gauge 1 $\frac{1}{4}$ X $\frac{3}{8}$ inch
Edge Metal: 16 oz copper, 2 inch X 4 inch X 10 feet
Valley Metal: 16 oz copper, 16 $\frac{1}{2}$ inch X 10 feet
Sheathing: $\frac{5}{8}$ inch thick APA span rated plywood
Caulk: Vulkem 116, Polyurethane Sealant
Manufacturer: Tremco

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PRI Accreditations: ICC-ES TL-189; State of Florida; Metro-Dade 03-0515.04: CRRC

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1.2 Method of Roof Construction:

PRI Asphalt Technologies constructed the deck used for this testing as described in the following and in accordance with the requirements of FBC TAS 100-95 and the Florida Building Code: Section 1518.

Deck

The test deck was constructed with standard 2 X 6 framing members, spaced 24 inches apart and 19/32 ($\frac{5}{8}$) inch thick APA rated plywood sheathing. The sheathing was attached with 8d common nails at 6 inches on center at the edges and 12 inches on center at intermediate supports. One valley was also constructed located at the front edge of the test deck as noted in Figure 1 of TAS 100-95.

Fire Barrier

A layer of $\frac{1}{4}$ inch thick Dens-Deck[®] was applied over the plywood sheathing prior to flashing and underlayment application. The Dens-Deck[®] was tacked in place with Galvanized Annular Ring Shank, 11 gauge $1\frac{1}{4}$ X $\frac{3}{8}$ inch at the sheet corners.

Metal Flashing

Galvanized, 16 oz copper, 2 inch X 4 inch metal drip edge was installed at the perimeter of the deck fastened 6 inches on center with 10-gauge 2 inch stainless steel annular ring shank head nails. All corners were overlapped a minimum of 5 inches.

The 16 oz 16½ inch wide copper valley flashing was installed using hand formed clips, which captured a $\frac{1}{2}$ inch return on the valley flashing edges. The clips were placed 12 inches on center and fastened to the deck with one 10-gauge 2 inch stainless steel annular ring shank nails.

Underlayment

A 36 inch wide ply of Soprema[®] Colphene 1500 self-adhering modified membrane was applied over the Dens-Deck[®] parallel to and centered on the valley. After the valley flashing was installed Soprema[®] HR/FR Granulated Colphene self-adhering modified membrane was installed starting at the eave and then applying additional sheets to cover the deck with a 4 inch overlap and minimum 6 inch end laps. The sheets of Soprema granule coated self-adhering membrane covered the metal drip edge ended at the centerline of the valley.

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Artificial Thatch Application

The Endureed Artificial Thatch Roofing strips were applied in accordance with the instructions provided by Country Cottage, Inc. and attached to this report. The first course of the Endureed Thatch Roofing System strips were placed at the eave with the exposure extending 12 inches beyond the eave. The subsequent courses were applied with a 7½ inch exposure. Each Endureed Thatch Roofing strip was fastened to the deck with four, 10-gauge, 2 inch stainless steel annular ring shank nails placed 10½ inches on center through predrilled holes in the stainless steel thatch strip spine. The Endureed Thatch Roofing was continued to the valley centerline forming a woven closed valley. Rake edges were flush with the drip edge.

1.3 Method of Conditioning

Conditioning was not required

1.4 Absorptive Material Description

The absorptive material used for the simulated rainfall calibration was 46 gauge organic felt.

1.7 Wind stream, Simulated Rain Fall, and Flow Meter Calibration Data and Calculations.

See Appendix A.

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1.8 Detailed Observations.

TAS 100 DATA AND OBSERVATIONS
Country Cottage Roofing
Endureed Artificial Thatch Roofing System
 December 4, 2003

Slope: 2" in 12"

Air Temp: 68 °F

Deck Conditioning: 16Hrs@135°F

Air Velocity Condition	Simulated Rainfall Condition	Duration
35 mph Fronds lifted at eave and rake edge to 90°.	8.8 in/hr No water infiltration under deck	15 min
0 mph No Frond movement	Off No water infiltration under deck	10 min
70 mph Fronds lifted at eave and rake edge to 90°.	8.8 in/hr No water infiltration under deck	15 min
0 mph No Frond movement	Off No water infiltration under deck	10 min
90 mph Fronds lifted at eave and rake edge beyond 90°.	8.8 in/hr No water infiltration under deck	15 min
0 mph No Frond movement	Off No water infiltration under deck	10 min
110 mph Fronds lifted at eave and rake edge beyond 90°.	8.8 in/hr No water infiltration under deck	5 min
0 mph No Frond movement	Off No water infiltration under deck	10 min

Summary Observations: Significant thatch frond movement was observed during the test. Fronds returned as much as possible to original position considering intertwining. No water infiltration on the underside of the deck was observed during the test.

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1.9 Volume of water, which infiltrated the sheathing at area of ridge vent.

Not applicable in this test.

1.10 Water Infiltration Through Sheathing.

None

1.11 Shingles Which Blow Off, Tear or Blow Upward Without Reseating:

None

2.0 Result of Testing:

Pass

The sample submitted for testing complies with all the requirements of Metro-Dade Protocol TAS 100-95, **TEST PROCEDURE FOR WIND AND WIND DRIVEN RAIN RESISTANCE OF DISCONTINUOUS ROOF SYSTEMS.**

Signed: *Gary H. Griswold*

Gary H. Griswold
Manager, Testing Services

Approved: *Charles L. Thomas*

Charles L. Thomas
Professional Engineer

Date: 12/22/03

Date: 12/17/03

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