



CONSTRUCTION MATERIALS TECHNOLOGIES

LABORATORY TEST REPORT

Report for: Global Innovation LLC
496 SW Ring Court
Lake City, FL 32025

Date: April 3, 2009

Attention: Abram Huber

Product Name:	Dominica Endureed Synthetic Fiber Thatch	Manufacturer:	Global Innovation
Date Received:	March 27, 2009	Source:	Global Innovation
PRI Report No.:	CCR-006-02-01	Test Dates:	March 30, 2009

Purpose: The purpose of this testing was to determine the solar reflectance of Global Innovation Dominica Endureed synthetic thatch.

Materials: The sample for testing was received from Global Innovation on March 27, 2009. The sample consisted of a 4 x 4 foot sample of the entire roofing system including the roofing system used under the thatch which included Soprema Colphene HR FR GR and the thatch roofing system. The thatch is a heterogeneously (variegated) colored surface.

Test Methods: The test methods used included ASTM C 1549-02: *Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Reflectometer* as modified by Cool Roof Rating Council and designated as CRRC-1 Method 1: *Standard Practice for Measuring Solar Reflectance of a Flat, Opaque, and Heterogeneous Surface Using a Portable Solar Reflectometer*. The emittance was measured using ASTM C 1371-04a: *Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers*. These methods are Cool Roof Rating Council (CRRC) approved for determining reflectance properties of variegated colored surfaces and emittance.

The solar reflectance index (SRI) was calculated in compliance with ASTM E 1980-01: *Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces*.

Results of Testing: All measurements were conducted at controlled laboratory conditions of 72 ± 3 °F and 50 ± 5 %RH. The testing was conducted on March 30, 2009 and April 3, 2009.

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Reflectance

Material ID	Test Method	Solar Reflectance, Air Mass = 1.5
Dominica Endureed Thatch	CRRC-1 Method 1/ASTM C 1549	0.49

Note: Reflectance measurements were conducted using a Devices and Services SSR-ER Version 5.0 reflectometer calibrated with Devices and Services Reference Standard: 0.807. The reflectance represents a total of 30 measurements of reflectance.

Emittance

Material ID	ASTM Test Method	Emittance, ϵ			
Specimen No.		1	2	3	Avg.
Dominica Endureed Thatch	C 1371	0.80	0.81	0.79	0.80

Note: Emittance measurements were conducted using a Devices and Services Emissometer Model AE calibrated with Devices and Services Reference Standards: High Emittance: 0.90 and Low Emittance: 0.06.

Solar Reflectance Index (Calculated using ASTM E 1980-01 for medium wind condition)

SRI = 54

Photograph of Roofing System Tested



Signed: Garrett Coulombe
Garrett Coulombe
Laboratory Technician

Signed: Donald C. Portfolio
Donald C. Portfolio
President

Date: April 3, 2009

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