



CONSTRUCTION MATERIALS TECHNOLOGIES

LABORATORY TEST REPORT

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

Date: February 8, 2010

Attention: Abram Huber

Product Name:	Kona Endureed Premium Thatch Shingle	Manufacturer:	Global Innovation
Date Received:	January 28, 2010	Source:	Global Innovation
PRI Report No.:	CCR-007-02-01	Test Date:	February 1, 2010

Purpose: The purpose of this testing was to determine the solar reflectance of Global Innovation Kona Endureed Premium Thatch Shingle.

Materials: The samples for testing were received from Global Innovation on January 28, 2010. The sample consisted of two pieces of Kona thatch. The Kona 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 February 1, 2010.

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PRI Accreditations: IAS-ES TL-189; State of Florida TST 5878; Miami-Dade 06-1116.02; CRRC

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Reflectance

Material ID	Test Method	Solar Reflectance, Air Mass = 1.5
Kona Endured Thatch	CRRC-1 Method 1/ASTM C 1549	0.45

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.
Kona Endured Thatch	C 1371	0.66	0.63	0.64	0.64

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.

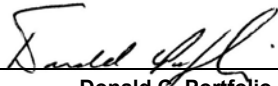
Solar Reflectance Index (Calculated using ASTM E 1980-01 for medium wind condition)

SRI = 41

Photograph of Kona Endured Premium Thatch Shingle



Signed: 
Steven Mueller
Laboratory Technician

Signed: 
Donald C. Portfolio
President

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