



LABORATORY TEST RESULTS

Report for: Hanover Specialties, Inc.

35 Feldland Street Bohemia, NY 11716

Attention: Steve Noskin

Product Name: Vitriturf	Manufacturer: Hanover Specialties, Inc.
Date Received: November 18, 2011	Source: Hanover Specialties, Inc.
PRI-CMT Report No.: HSV-002-02-01-A	Test Dates: Nov 11 – Dec 5, 2011

Purpose: The purpose of this testing was to determine the solar reflectance, thermal

emittance, and solar reflectance index value of Vitriturf.

Materials: The samples for testing were received from Hanover Specialties, Inc. on November

18, 2011.

Test Methods: The test methods used included ASTM C 1549-09: Standard Test Method for

Determination of Solar Reflectance Near Ambient Temperature Using a Portable Reflectometer and ASTM C 1371-04a: Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers. Both of these methods are Energy Star, Leadership in Energy and Environmental Design (LEED), and Cool Roof Rating Council (CRRC) approved methods for determining

radiative properties.

The solar reflectance index (SRI) was calculated in compliance with ASTM E 1980-98e1: Standard Practice for Calculating Solar Reflectance Index of Horizontal and

Low-Sloped Opaque Surfaces.

Results: All measurements were conducted at controlled laboratory conditions of

 72 ± 3 °F and 50 ± 5 %RH.

Reflectance

Specimen	Test Method	N	Avg.	Std. Error
Solar Reflectance at air mass = 1.5	ASTM C 1549			
Gray/Eggshell		57	0.344	0.005
Lite Blue/Eggshell		32	0.432	0.002
Red/Gray		32	0.237	0.002

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.

Emittance

Specimen	Test Method	1	2	Avg.	Std. Dev.
Emittance	ASTM C 1371				
Gray/Eggshell		0.84	0.88	0.86	0.028
Lite Blue/Eggshell		0.87	0.84	0.86	0.021
Red/Gray		0.86	0.85	0.86	0.007

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 (SRI)

Vitriturf - Gray/Eggshell

Reflectance (a) 0.34 Emittance (ϵ) 0.86 Absorptance (α) 0.66

Low-Wind	Conditio	<u>n</u>	
	$h_c =$	5	W/m ² ·K
C _{low-wind}		0.660	_
SRI _{low-wind}		35	
			_

Medium-Wind	Condition	
h_c	= 12	W/m²·ł
C _{medium-wind}	0.650)
SRI _{medium-wind}	36	

High-Wind	Condition	on_	
	$h_c =$	30	W/m ² ·K
C _{high-wind}		0.641	_
SRI _{high-wind}		37	
-			•

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Hanover Specialties, Inc. Laboratory Report Page 3 of 3

Vitriturf - Lite Blue/Eggshell

Reflectance (a) 0.43 Emittance (ϵ) 0.86 Absorptance (α) 0.57

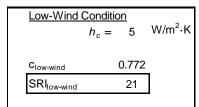
Low-Wind	Conditio	<u>n</u>	
	$h_c =$	5	W/m ² ·K
C _{low-wind}		0.568	}
SRI _{low-wind}		47	
			_

Medium-Wi	nd Con		
	$h_c =$	12	W/m ² ·K
	Ü		
C _{medium-wind}		0.559	_
SRI _{medium-wi}	ind	48	
			•

$\frac{\text{Condition}}{h_c} =$	<u>on</u> 30	W/m²·K
	0.552	
	49	1
	h _c =	$\frac{\text{Condition}}{h_c = 30}$ $\frac{0.552}{49}$

Vitriturf - Red/Gray

Reflectance (a) 0.24 Emittance (ϵ) 0.86 Absorptance (α) 0.76



$$\frac{\text{Medium-Wind Condition}}{h_c = 12} \text{W/m}^2 \cdot \text{K}$$

$$\frac{c_{\text{medium-wind}}}{\text{SRI}_{\text{medium-wind}}} \frac{0.760}{22}$$

High-Wind	Condition	<u>on</u>	
-	$h_c =$	30	W/m ² ·K
C _{high-wind}		0.750	_
SRI _{high-wind}		23	
			_

The Solar Reflectance Index of this material was calculated in accordance with **ASTM E 1980**: **Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces**. The laboratory test results presented in this report are representative of the material supplied.

Signed:

Brandon Clark
Laboratory Technician

Signed:

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Director

Date:

December 14, 2011

Date:

December 14, 2011

Report Issue History:

Issue #	Date	Pages	Revision Description (if applicable)
Original	12/07/2011	3	NA
Ā	12/14/2011	3	Update product names

END OF REPORT

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