



# CONSTRUCTION MATERIALS TECHNOLOGIES



ACCREDITED



## LABORATORY TEST REPORT

**Report for:** Hanover Specialties, Inc.  
901 Motor Parkway  
Hauppauge, NY 11788

**Date:** April 29, 2009

**Attention:** Steven Noskin

**Purpose:** The purpose of this testing was to determine the solar reflectance, emittance and solar reflectance index (SRI) of Vitriturf.

**Materials:** The sample for testing was received from Hanover on April 29, 2009. The sample was labeled as indicated in the data table in the results section of this report. One 12 x 12 inch sample was provided for testing. The color was 50% Eggshell and 50% Tan.

**Test Methods:** The test methods used included ASTM C 1549-04: *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 Emitters*. Both of these methods are Cool Roof Rating Council (CRRC) approved methods for determining these properties. The emittance measurement was corrected for low thermal conductivity material in accordance with Devices and Services Technical Note 79-17. 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 laboratory conditions of  $23 \pm 2^\circ\text{C}$  and  $50 \pm 5$  percent relative humidity. The testing was conducted on April 29, 2009.

HSV-001-02-01

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**Reflectance**

Material ID	ASTM Test Method	Result, Solar Reflectance, Air Mass = 1.5			
		1	2	3	Avg.
Specimen No.					
Vitriturf	C 1549	0.456	0.442	0.457	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.

**Emittance**

Material ID	ASTM Test Method	Emittance, $\epsilon$			
		1	2	3	Avg.
Specimen No.					
Vitriturf	C 1371	0.76	0.73	0.74	0.74

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), Calculated using ASTM E 1980.**

Vitriturf  
 Reflectance (a) 0.45  
 Emittance (e) 0.74  
 Absorptance (a) 0.55

Low-Wind Condition	
$h_c =$	5 W/m <sup>2</sup> ·K
$C_{low-wind}$	0.605
<b>SRI<sub>low-wind</sub></b>	<b>42</b>

Medium-Wind Condition	
$h_c =$	12 W/m <sup>2</sup> ·K
$C_{medium-wind}$	0.577
<b>SRI<sub>medium-wind</sub></b>	<b>46</b>

High-Wind Condition	
$h_c =$	30 W/m <sup>2</sup> ·K
$C_{high-wind}$	0.554
<b>SRI<sub>high-wind</sub></b>	<b>49</b>

Signed: Garrett Coulombe  
 Garrett Coulombe  
 Laboratory Technician

Signed: Donald C. Portfolio  
 Donald C. Portfolio  
 President

Date: April 29, 2009

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