



CONSTRUCTION MATERIALS TECHNOLOGIES

LABORATORY TEST RESULTS

Report for: TechnoNicol LLC **Attention:** Dan Ildus Nagaev
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Moscow, 129110

Product(s): Three (3) samples (see below)	Manufacturer: TechnoNicol LLC
Project No.: TECH-001-02-01	Source: TechnoNicol LLC
Date(s) Received: Oct. 23, 2014	Test Date(s): Oct. 29, 2014

Purpose: The purpose of this testing was to determine the solar reflectance, thermal emittance, and solar reflectance index value of Three (3) samples:

- *Logicroof V-RP White Smooth Top*
- *Logicroof V-RP Light Grey Smooth Top*
- *Logicroof V-RP Light Grey Embossed Top*

Materials: The sample for testing was received from TechnoNicol LLC. The sample was labeled as indicated in the data table in the results section of this report.

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(2010)^{e1}: *Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emittance Meters*. Thermal emittance measurement for sample was modified in accordance with Devices and Services Company's Tech Note 04-1. 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 1980-11: *Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces*.

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Results: All measurements were conducted at 72±3°F and 50±5%RH.

Sample ID	Solar Reflectance		Thermal Emittance		SRI		
	ASTM C 1549 ¹		ASTM C 1371 ²		ASTM E 1980 ³		
	Avg.	Std.Dev.	Avg.	Std.Dev.	Low-Wind	Medium-Wind	High-Wind
LogicRoof V-RP White Smooth Top	0.82	0.00	0.88	0.00	101	102	102
Logicroof V-RP Light Grey Smooth Top	0.39	0.00	0.89	0.02	43	44	44
Logicroof V-RP Light Grey Embossed Top	0.40	0.00	0.89	0.01	44	45	45

Note(s): 1- Reflectance measurements were conducted using a Devices and Services SSR-ER Version 6.4 Reflectometer operated in v5 emulation mode and calibrated with Devices and Services Reference Tile # D-18.
 2- Emittance measurements were conducted using a Devices and Services Emittance Model AE calibrated with Devices and Services Reference Standards: High Emittance: 0.90 and Low Emittance: 0.06. Thermal emittance measurement for sample was modified in accordance with Devices and Services Company's Tech Note 04-1.
 3- SRI calculations per ASTM E 1980 utilize the following assumptions: Low-Wind $h_c = 5 \text{ W/m}^2\text{-K}$, Medium-Wind $h_c = 12 \text{ W/m}^2\text{-K}$, and High-Wind $h_c = 30 \text{ W/m}^2\text{-K}$.

Statement of Attestation: The Solar Reflectance Index of these samples 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 materials supplied.

Signed: 
 Brad Grzybowski
 Managing Director

Date: Oct. 29, 2014

Report Issue History:

Issue #	Date	Pages	Revision Description (if applicable)
Original	10/29/2014	2	NA
Amendment	10/30/2014	2	Typographical error in address, reorder of samples, additional descriptor added to "Logicroof V-RPW White"

END OF REPORT

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