



Test Report

Solar Reflective Index (SRI) Measurements According to ASTM E1980 on SICC GmbH “ThermoActive TopShield TopCoat”

Prepared For:

SICC GmbH
Attention: Mr. Dagmar Grass
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R & D Services, Inc.
P.O. Box 2400
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Report: RD14104

A handwritten signature in black ink, appearing to read 'Stuart Ruis', written over a horizontal line.

Stuart Ruis
President

March 6, 2014

The test results in this report apply only to the specimens tested. The tests conform to the respective test methods except for the report requirements. The report includes summary data but a full complement of data is available upon request. This report shall not be reproduced, except in full, without written approval of R & D Services, Inc. This report must not be used by the client to claim product endorsement by R & D Services, Inc., IAS or any other organization.



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Calculated Solar Reflectance Indices (SRI) Report

Test Number: RD141318

Date of Test: February 20, 2014

Specimen Number: 1827140214-1,9

Date of Manufacture: Unknown

Description of Test Specimen: ThermoActive TopShield TopCoat

Test Method: ASTM E 1980-11, "Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low Sloped Opaque Surfaces".

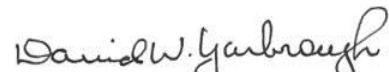
Report Prepared For: SICC GmbH / Mr. Dagmar Grass

Description

Measured solar reflectance and measured thermal emittance were used to calculate Solar Reflectance Indices (SRI) in accordance with ASTM E 1980-11 for nine coated panel specimens provided by SICC GmbH. The specimens were labeled as identified in the table below. The coated panel specimens were tested for thermal emittance and solar reflectance. The average thermal emittance and solar reflectance for all nine panels were used for the SRI calculation. The calculated SRI for low, medium and high wind speed is listed below.

Results

Specimen Number	Identification	Reflectance	Emittance	Solar Reflective Index (SRI)		
				Low Wind	Med Wind	High Wind
1827140214-1,9	ThermoActive TopShield TopCoat	0.887	0.875	111.2	111.4	111.5


 David W. Yarbrough, PhD, PE

3-6-2014
 Date



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Total Hemispherical Emittance Test Report

Test Number: RD141319HE Date of Test: February 20, 2014

Specimen Number: 1827140214-1,9 Date of Manufacture: Unknown

Description of Test Specimen: ThermoActive TopShield TopCoat.

Test Method: ASTM C 1371-04a(2010)e1, "Test Method for Determination of Emittance of Materials near Room Temperature Using Portable Emitters".

Report Prepared For: SICC GmbH / Mr. Dagmar Grass

Procedure

This report presents the results of the test specimen identified above using a Model AE emissometer manufactured by Devices and Services Company of Dallas, Texas. The emissometer is powered to provide warm-up prior to use. A warm-up time of one hour in a conditioned laboratory has been found to be acceptable. Calibration at high (0.86) and low (0.06) emittance is performed after the warm-up period using calibration disks supplied by Devices and Services Company. Test specimens are placed in good contact with the thermal sink that is part of the apparatus. A drop of distilled water between the test specimen and a thermal sink was used to improve the thermal contact. The measurement head of the emissometer is placed on the test specimen and held in place at least 90 seconds for each measurement. The emissometer was calibrated prior to use and calibration was verified at the end of testing. The average emittance reported below is based on three measurements.

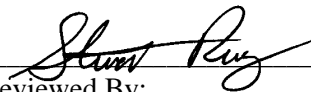
Results

Test Temperature: 68 °F
 Test Humidity: 42 %RH

R&D Identification	Specimen Description	IR Emittance	Standard Deviation
1827140214-1,9	ThermoActive TopShield TopCoat	0.875	0.003

Uncertainty

The 95 % reproducibility as stated in Section 10 of ASTM C1371-04a is 0.019 units.


 Reviewed By: _____

3-6-2014
 Date: _____



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Solar Reflectance Test Report

Test Number: RD141320SR Date of Test: February 20, 2014

Specimen Number: 1827140214-1,9 Date of Manufacture: Unknown

Description of Test Specimen: ThermoActive TopShield TopCoat.

Test Method: ASTM C 1549-09, "Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer."

Report Prepared For: SICC GmbH / Mr. Dagmar Grass

Procedure

The measurement of solar reflectance in accordance with ASTM C 1549-09 was completed using a solar reflectometer built by Devices and Services Company. The reflectometer was calibrated using standards with reflectance 0.0 and reflectance 0.823 prior to use. The solar reflectance measurements were made in a conditioned laboratory space. The solar reflectance was measured at air mass 1.5. Unless otherwise stated, all test surfaces were cleaned to remove dirt or any other blemishes prior to testing.

Results

Test Temperature: 68 °F
 Test Humidity: 42 %RH

R&D Identification	Specimen Description	Average Reflectance	Standard Deviation
1827140214-1,9	ThermoActive TopShield TopCoat	0.887	0.001


 Reviewed By: _____

3-6-2014
 Date: _____