SUNMODO CORPORATION
MIAMI-DADE TEST REPORT

SCOPE OF WORK
TAS 100(A) TESTING ON NANOMOUNT, ROOF MOUNTS

REPORT NUMBER
K6195.02-109-18

TEST DATE(S)
02/13/20

ISSUE DATE
03/03/20

RECORD RETENTION END DATE
02/13/30

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ATI 20009

LABORATORY CERTIFICATION NO.
19-0321.16

PAGES
13

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SECTION 1
SCOPE

Intertek Building & Construction (B&C) was contracted by SunModo Corporation to perform TAS 100(A) testing in accordance with Miami-Dade County requirements on their NanoMount, roof mount. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at the Intertek B&C test facility in York, Pennsylvania. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

For INTERTEK B&C:

COMPLETED BY: Kyle W. Ruth
TITLE: Technician
SIGNATURE: [Signature]
DATE: 03/03/20

REVIEWED BY: Daniel C. Culbert, P.E.
TITLE: Senior Project Engineer
SIGNATURE: [Signature]
DATE: 03/03/20

2020.03.03 17:17:56 -05'00'

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SECTION 2
TEST METHOD(S)

The specimens were evaluated in accordance with the following:

TAS 100(A)-95, Test Procedure for Wind and Wind Driven Rain Resistance and/or Increased Windspeed Resistance of Soffit Ventilation Strip and Continuous or Intermittent Ventilation System Installed at the Ridge Area.

SECTION 3
CALIBRATION

Windstream, water supply, and water distribution calibration were performed prior to testing. Reference Intertek B&C Calibration Report No. K5146.02-109-18, dated 1/8/20, for descriptions and results.

SECTION 4
MATERIAL SOURCE

Test specimens were provided by the client. Representative samples of the test specimen(s) will be retained by Intertek B&C for a minimum of ten years from the test completion date.

SECTION 5
EQUIPMENT

Vane Axial Fan – Y003346
Stopwatch - INT00974

SECTION 6
LIST OF OFFICIAL OBSERVERS

<table>
<thead>
<tr>
<th>NAME</th>
<th>COMPANY</th>
</tr>
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<tbody>
<tr>
<td>Tyler J. Holland</td>
<td>Intertek B&amp;C</td>
</tr>
<tr>
<td>John A. Shanabrook</td>
<td>Intertek B&amp;C</td>
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<td>Intertek B&amp;C</td>
</tr>
<tr>
<td>Daniel C. Culbert, P.E.</td>
<td>Intertek B&amp;C</td>
</tr>
<tr>
<td>Kyle W. Ruth</td>
<td>Intertek B&amp;C</td>
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SECTION 7
TEST SPECIMEN DESCRIPTION

Product Type: NanoMount
Series/Model: Roof Mount

Product Size(s):

<table>
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<tr>
<th>OVERALL AREA:</th>
<th>DIAMETER</th>
<th>HEIGHT</th>
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<tbody>
<tr>
<td>0.01 m² (0.1 ft²)</td>
<td>millimeters</td>
<td>millimeters</td>
</tr>
<tr>
<td>Mount size</td>
<td>102</td>
<td>87</td>
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</table>

Roof Deck Description: An 8’ 0" wide by 6’ 0" long roof deck with 2:12 slope was utilized. The roof deck consisted of #2 Spruce-Pine-Fir nominal 2x6 rafters sheathed with 15/32" plywood. The rafters were spaced 24" on center. The plywood was secured to the rafters with 1-5/8" drywall screws spaced 6" on center around the perimeter and 12" on center at the intermediate supports. The plywood sheathing was covered with 30# felt underlayment and three-tab shingles.

NanoMount Description: The test specimens consisted of a 4" diameter by 3-7/16" high by 5/16" thick aluminum mount. One 11/32" diameter installation hole was located at the center of the base and four 1/4" diameter installation holes evenly spaced on the base. A 3-1/2" diameter by 1/4" thick self-stick foam pad was attached under the installation holes.

Nano Deck Mount Installation: The mount was then placed over the shingles and secured with four 1/4" by 3" self-drilling hex cap head screws with 1/2" diameter washer and foam seal. The underside of the mount was sealed with sealant.

Nano Rafter Mount Installation: A 7/32" pilot hole was drilled 2-1/4" below the leading edge of the next course of shingles directly into the rafter then filled with sealant. The mount was then placed over the pre-drilled hole and secured with a 5/16" by 4-1/4" lag bolt with 3/4" diameter washer and foam seal. The underside of the mount was sealed with sealant.
SECTION 8
TEST RESULTS

Protocol TAS 100(A)-95, Wind Driven Rain

Test Date(s): 2/13/20
The temperature during testing was 7°C (45°F). The results are tabulated as follows:

Test Procedure: The wind speed intervals were conducted as follows:

<table>
<thead>
<tr>
<th>Interval No.</th>
<th>Wind Speed (mph)</th>
<th>Time (min)</th>
<th>Water Spray</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>35</td>
<td>15</td>
<td>On</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>5</td>
<td>Off</td>
</tr>
<tr>
<td>3</td>
<td>70</td>
<td>15</td>
<td>On</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>5</td>
<td>Off</td>
</tr>
<tr>
<td>5</td>
<td>90</td>
<td>15</td>
<td>On</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>5</td>
<td>Off</td>
</tr>
<tr>
<td>7</td>
<td>110</td>
<td>5</td>
<td>On</td>
</tr>
<tr>
<td>8</td>
<td>0</td>
<td>5</td>
<td>Off</td>
</tr>
</tbody>
</table>

Test Results: The TAS 100(A) test results are as follows:

<table>
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<tr>
<th>Wind Speed</th>
<th>Results</th>
<th>Allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 mph</td>
<td>0 oz.</td>
<td>No leakage</td>
</tr>
<tr>
<td>70 mph</td>
<td>0 oz.</td>
<td>No leakage</td>
</tr>
<tr>
<td>90 mph</td>
<td>0 oz.</td>
<td>No leakage</td>
</tr>
<tr>
<td>110 mph</td>
<td>0 oz.</td>
<td>No leakage</td>
</tr>
<tr>
<td>Total</td>
<td>0 oz.</td>
<td>No leakage</td>
</tr>
</tbody>
</table>

Results: Pass

General Note: Eight roof attachments were installed on a common deck. Four Nano mounts were evaluated, two deck mounted and two rafter mounted, with no leakage.
SECTION 9
PHOTOGRAPHS

Photo No 1
Top Side of Test Deck Before Testing
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Photo No. 2
Nano Deck Mounted Test Specimen

Photo No. 3
Nano Rafter Mounted Test Specimen
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Photo No. 4
Underside of Test Deck Before Testing

Photo No. 5
35 MPH
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Photo No. 6
70 MPH

Photo No. 7
90 MPH
Photo No. 8
110 MPH

Photo No. 9
Underside of Deck After Testing
SECTION 10
DRAWINGS

The test specimen drawings have been reviewed by Intertek B&C and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.
**Small and Mighty have been combined to create the NanoMount™**

SunModo has brought nanotechnology to the composite shingle roof top with its Raft and Deck Mount NanoFlashing attachments.

The NanoMount technology eliminates the need for lifting shingle to install traditional large metal flashings.

SunModo’s NanoMount ensures a watertight seal by compressing its integrated ultra-soft weather-resistant (USWR) Sealing Gasket tightly against the asphalt roof shingle.

The Nano Rafter Mount kit (K50044-001) comes with a 5/16 Lag Screw and Sealing Washer.

The Nano Deck Mount (K50044-002) comes with Self-Tapping Screw and Sealing Washers.

These robust aluminum NanoMounts have been engineered to handle the wind-loads in zones 1, 2 or 3 on the roof. And the unibody construction of the NanoMount ensures it can standup to the heaviest snow loads.

Both products incorporate SunModo’s 4” diameter nano-flashing technology, 3-1/2” tall integrated L-Foot and the USWR Sealing Gasket.

**Features & Benefits:**

- Unibody aluminum cast construction with integrated USWR Sealing Gasket.
- Nano Rafter Mount and Nano Deck Mount attachments are available in silver or black.
- Eliminates the need to lift shingles.
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SECTION 11
REVISION LOG

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