

CLIENT: **Pegasus Solar Inc.**
911 Bern Court, Suite 110
San Jose, CA 95112

Report No: RJ6493P-1

Issue Date: September 14, 2018

SUBJECT: Rain Test on Solar Panel Tile Sleds.

SAMPLE ID: Two each, PEGASUS SOLAR™ Tile Sleds.

SAMPLING DETAIL: Test samples were submitted to the laboratory directly by the client. No special sampling conditions or sample preparation were observed by QAI.

DATE OF RECEIPT: The samples were received at QAI Laboratories on September 6, 2018.

TESTING PERIOD: September 13, 2018.

AUTHORIZATION: QAI Test Proposal 18MB08312 dated August 31, 2018 signed by Peter Wilke of Pegasus Solar Inc. on September 4, 2018.

TEST REQUESTED: Rain Test per Section 4.1 of ICC ES *Acceptance Criteria for Roof Flashing for Pipe Penetrations*, AC286, Approved October 2012.

TEST RESULTS: Test results are provided on page 2 of this report.


STATEMENT OF CONFORMITY: The PEGASUS SOLAR™ tile sleds **Passed** the test and demonstrated compliance with Section 4.1 of ICC-ES *Acceptance Criteria for Roof Flashing for Pipe Penetrations*, AC286, Approved October 2012.

Tested By



Nathan Juarez
Test Technician

**Signed for and on behalf of
QAI Laboratories Inc.**



Larry Burmer
Physical Lab Supervisor

RAIN TEST PER SECTION 4.1 OF ICC ES AC286

Test Deck Assembly

Testing was performed in accordance with Section 27 of UL 441, Gas Vents, modified in accordance with Section 4.1 of ICC ES AC 286. Two simulated roof decks measuring 36" wide by 36" long were constructed for the test. Each roof deck consisted of nominal 2 x 4 wood framing with one center rafter mid-span between framing members, ²³/₃₂" thick, Exposure 1, CDX Plywood Sheathing and #30 roofing felt. One tile sleds was positioned at the center of each test deck and secured to the deck with two ⁵/₁₆" x 3½" long stainless steel flange head lag screws. The lag screws were placed though two slots located on the tile sled and into two pre-drilled holes in the center wood rafter. Prior to securing the tile sleds to the roof decks, RainBuster Roof Tile Adhesive/Sealant was applied into and around each of the pre-drilled holes. The sealant was allowed to cure for 24 hours prior to testing. Photographs of the tile sleds installed on the test decks are provided on page 3 of this report.

Test Procedure

One test deck was placed at a 2:12 slope and the other deck placed at a 9:12 slope. The tile sleds were then subjected to water spray for a period of one hour at an average water delivery rate of 6 inches per hour. The water spray was applied to the tile sleds through a water spray system as shown in figure 27.1 of UL 441. At the end of the one hour period, the tile sleds were removed from the test decks and the test decks examined for evidence of water penetration at the lag screws and on the underside of the roofing felt. The roof decks were also examined for evidence of water penetration to the underside of the deck. Photographs of the test set-up are provided on page 4 of this report.

Test Requirements

There shall be no evidence of water penetration through or around the tile sled, on the underside of the roofing felt, or the underside of the test deck.

Test Results

Test Assembly No.	Observations
1 (2:12 Slope)	No evidence of water penetration was observed through or around the tile sled, on the underside of the roofing felt, or the underside of the test deck.
2 (9:12 Slope)	No evidence of water penetration was observed through or around the tile sled, on the underside of the roofing felt, or the underside of the test deck.

Photographs showing the results of this test are provided on pages 5 thru 7 of this report.

PHOTOGRAPHS



Photograph No.1
Tile Sled Mounted on Roof Deck No.1



Photograph No.2
Tile Sled Mounted on Roof Deck No.2

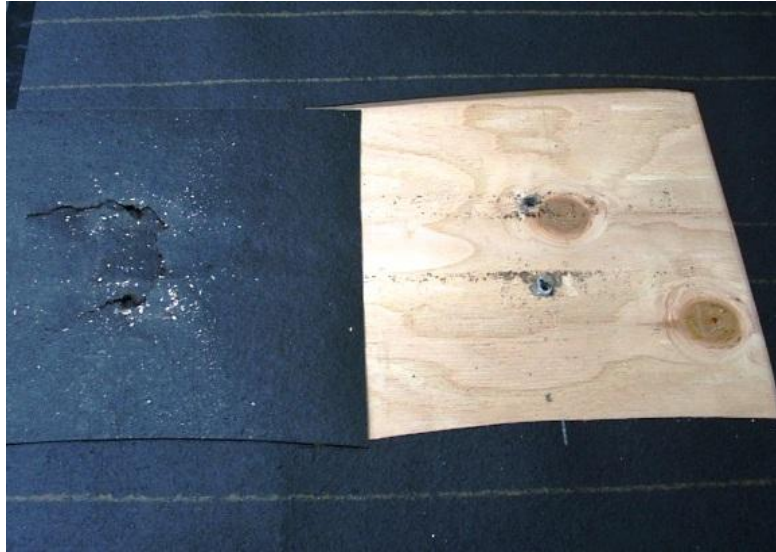
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PHOTOGRAPHS



Photograph No.3
Rain Test Set-up

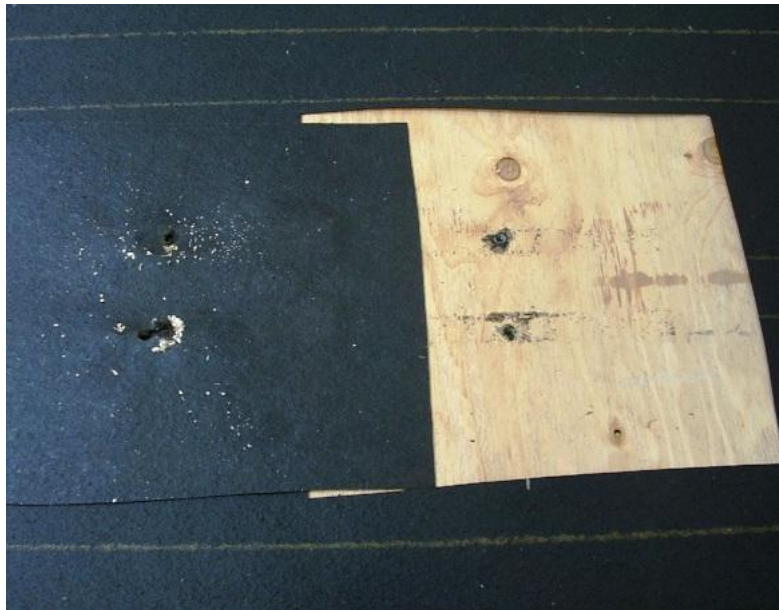
PHOTOGRAPHS



Photograph No.4

Results of Rain Test Conducted on Deck No.1 (2:12 Slope)

No evidence of water penetration was observed through or around the tile sled
or on the underside of the roofing felt



Photograph No.5

Results of Rain Test Conducted on Deck No.1 (9:12 Slope)

No evidence of water penetration was observed through or around the tile sled
or on the underside of the roofing felt

PHOTOGRAPHS



Photograph No.6
Results of Rain Test Conducted on Deck No.1 (2:12 Slope)
No Water Penetration to the Underside of the Roof Deck Occurred.

PHOTOGRAPHS



Photograph No.7
Results of Rain Test Conducted on Deck No.2 (9:12 Slope)
No Water Penetration to the Underside of the Roof Deck Occurred.

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