

ESDEC, INC. TEST REPORT

SCOPE OF WORK

UL 441 TESTING ON ECOFASTEN'S RIBFIT SLIDE

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SUMMARY REPORT

17-MARCH-2021

Intertek Report No.: 104594388LAX-002

Intertek Project No.: G104594388

Yann Schwarz
ESDEC, Inc.
28357 Industrial Blvd.
Hayward, CA 94545

Ph: 510 225-0973
Email: yann.schwarz@esdec.com

Subject: Project Summary of the Rain Testing per UL 441 on Ecofasten's Ribfit Slide

Dear Mr. Yann Schwarz

Intertek was contracted by ESDEC, Inc. to perform testing in general accordance with UL 441 on Ecofasten's Ribfit Slide for photovoltaic (PV) module attachment. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at ESDEC's test facility at 28357 Industrial BLVD, Hayward, CA 94545.

This letter report represents the summary of our evaluation of the above referenced product(s).

UL 441, Safety for Gas Vents, Section 27: Rain Test

This letter report does not constitute certification of this product or any opinion or endorsement by this laboratory. If there are any questions regarding the results contained in this report, or any of the other services offered by Intertek, please do not hesitate to contact your dedicated Intertek Project Manager.

Completed by:	Deep Vora	Reviewed by:	Samantha Doshi
Title:	Project Engineer	Title:	Team Lead - Solar
Signature:		Signature:	
Date:	March 17, 2021	Date:	March 17, 2021

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SUMMARY REPORT

SECTION 1

MATERIAL SOURCE/INSTALLATION

The test specimen was provided by the client. The specimen was installed onto a R-Panel metal roof with a Spruce-Pine-Fir wood deck frame. The test deck frame measured 3’ wide by 3’ high and was constructed of #2 Spruce Pine Fir nominal 2x4 lumber with no center rafter. A sheet of 3’ wide by 3’ high, galvalume 26-gauge R-Panel was secured to the top of the deck frame with #10-14 x 1” tapping screws with EPDM bonded washer.

Description/Installation (Ribfit’s Slide by Ecofasten): The test specimen was composed of an approx. 3” high by 4.75” long x 1.25” wide extruded aluminum mount with an EPDM foam rubber pad. The mount was secured with four JF3-2-5.5x35-E16 sheet metal screws with EPDM bonded washer through the mount and into the center ridge top of the R panel. The assembly was installed without sealant.

Ribfit Slide Part numbers covered by this test report are as follows:

Part Number	Description
1510056 or 2013010	RF STEEL SLIDE AL MLL

SECTION 2

LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Jae Hendrickson	ESDEC, Inc.

SECTION 3

TEST RESULTS

The temperature during testing was 22°C (71°F) and the humidity was 55%. The results are tabulated as follows:

Test Specimen #1 (Ribfit Slide by Ecofasten):

TITLE OF TEST	RESULTS	ALLOWED	NOTE
Water Penetration, Per UL 441 - One hour of water spray	Pass	No leakage	1, 2, 3, 4

General Note: All testing was performed in accordance with the referenced standard(s).

Note 1: Tested at 2/12 pitch

Note 2: Test results are applicable for metal roofs having a slope of 2:12 or greater.

Note 3: No sealant was used in this test.

Note 4: Applicable to 26-gauge thick metal roof panels or thicker.

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SECTION 4
PHOTOGRAPHS

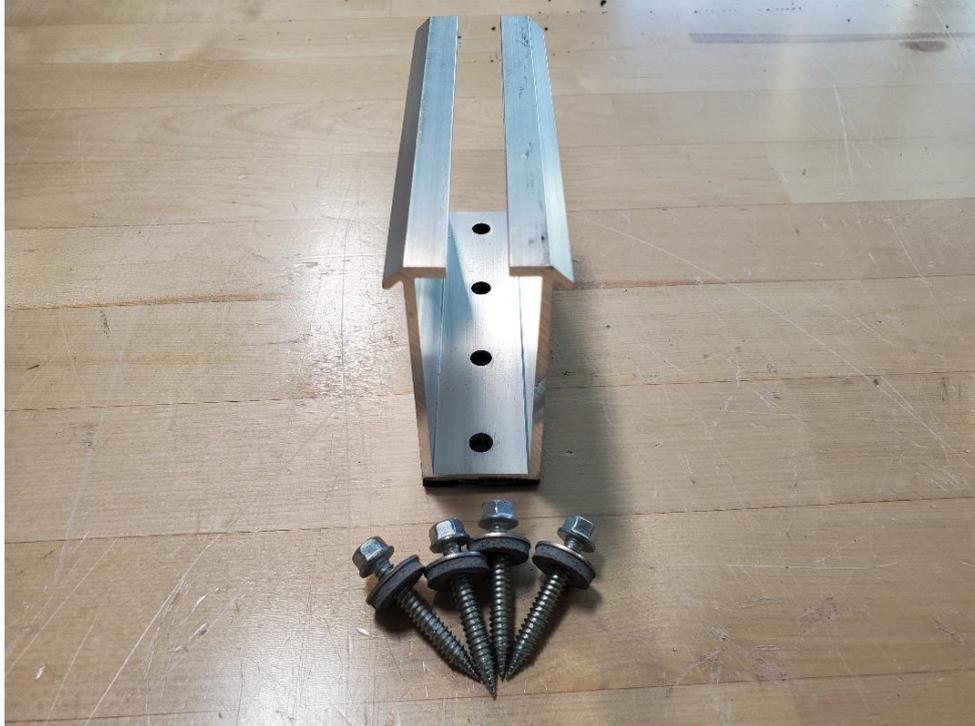


Photo No. 1

Unassembled Test Specimen (including 4 sheet metal screws, and 1 aluminium mount)

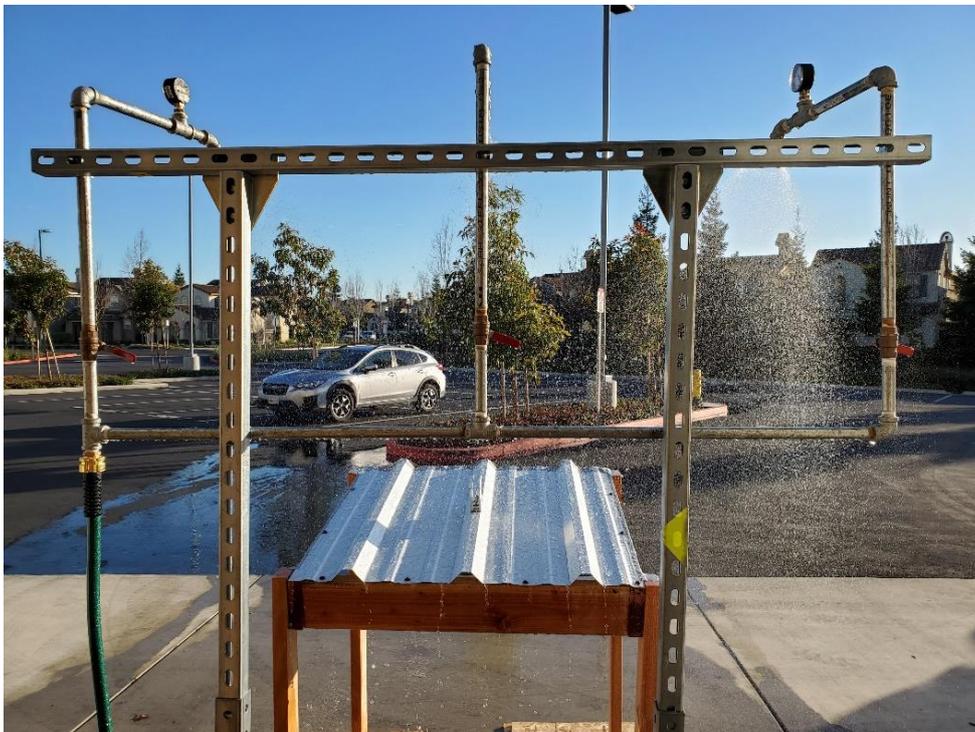


Photo No. 2

Test Specimen Under Test

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Photo No. 3
Test Specimen After Test

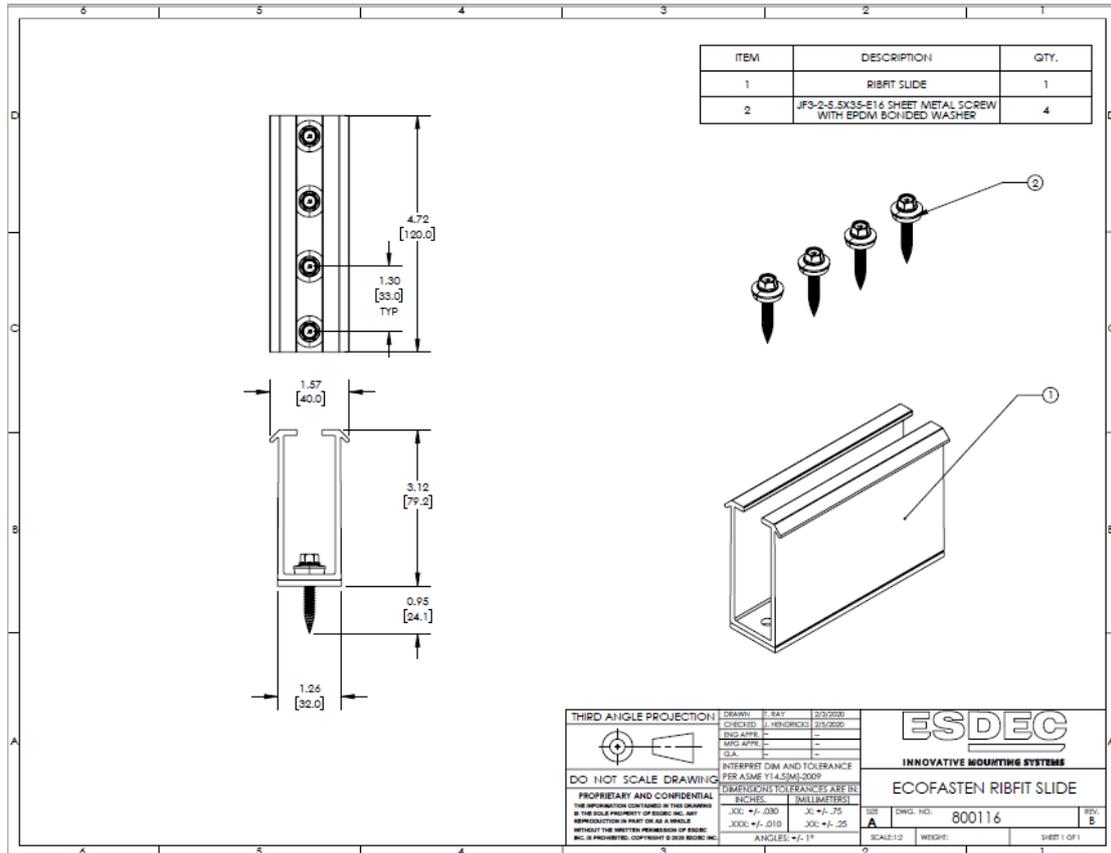


Photo No. 4
Underside of Test Desk After Test – no visible water penetration

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SECTION 5
DRAWINGS

The test specimen drawings have been reviewed by Intertek and are representative of the test specimen(s) reported herein. Any deviations are documented herein or on the drawings.



Drawing No. 1
Ecofasten's Ribfit Slide