

# QUICKBOLT – A DIVISION OF QUICKSCREWS INTERNATIONAL CORPORATION TEST REPORT

## SCOPE OF WORK

WATER TESTING OF QB2 WITH 3" AND 4" MICROFLASHING®

## REPORT NUMBER

J6283.01-301-44

## TEST DATES

08/20/19 – 08/30/19

## ISSUE DATE

09/20/19

## RECORD RETENTION END DATE

08/30/24

## PAGES

10

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## TEST REPORT FOR QUICKBOLT – A DIVISION OF QUICKSCREWS INTERNATIONAL CORPORATION

Report No.: J6283.01-301-44

Date: 09/20/19

### REPORT ISSUED TO

#### QUICKBOLT, A DIVISION OF QUICKSCREWS INTERNATIONAL CORPORATION

5830 Las Positas Road

Livermore, California 94551

### SECTION 1

#### SCOPE

Intertek Building & Construction (B&C) was contracted by Quickscrews International Corporation, Livermore, California to perform testing in accordance with ASTM E331, ASTM E331 (modified), and ASTM E2140 (modified), on their 3" and 4" Microflashing. Results obtained are tested values and were secured by using the designated test methods. Testing was conducted at Intertek test facility in Fresno, California.

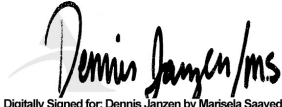
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### SECTION 2

#### SUMMARY OF TEST RESULTS

TITLE	RESULTS
ASTM E331 (modified), 120 min @ 15.Opsf	No Leakage
ASTM E2140 (modified), 6" water column for 7 days	No Leakage

For INTERTEK B&C:

<b>COMPLETED BY:</b>	Dennis Janzen
<b>TITLE:</b>	Technician
<b>SIGNATURE:</b>	 Digitally Signed for: Dennis Janzen by Marisela Saavedra
<b>DATE:</b>	09/20/19

<b>REVIEWED BY:</b>	Tyler Westerling, P.E.
<b>TITLE:</b>	Senior Project Engineer
<b>SIGNATURE:</b>	 Digitally Signed by: Tyler Westerling
<b>DATE:</b>	09/20/19

EC:ms

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### SECTION 3

#### TEST METHODS

The specimens were evaluated in general accordance with the following:

**ASTM E331-00(2016) - (modified)**, *Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference*

**Note:** *The test time was extended beyond the time stated in the standard.*

**ASTM E2140-01(2017) – (modified)**, *Standard Test Method for Water Penetration of Metal Roof Panel Systems by Static Water Pressure Head*

**Note:** *The test time was extended beyond the time stated in the standard.*

### SECTION 4

#### INSTALLATION

Test specimen was provided by the client. Representative samples of the test specimens will be retained by Intertek B&C for a minimum of five years from the test completion date.

A test roof was constructed using 2 x 10 and 2 x 4 lumber with a piece of rigid, clear plastic over the top. The specimens were then installed through a piece of generic asphalt roof shingle according to the manufacturer's instructions with provisions to observe any water leakage.

### SECTION 5

#### EQUIPMENT

Type	Manufacturer	Asset Number
Control Panel	Intertek-ATI	Y003301
Spray Rack	Intertek-ATI	63331

### SECTION 6

#### LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Tyler Westerling, P.E	Intertek B&C
Gino Vitali	Intertek B&C

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### SECTION 7

#### TEST SPECIMEN DESCRIPTION

**Product Type:** Solar Panel Mounting Point

**Name:** QB2 WITH MICROFLASHING®

COMPONENT	MATERIAL	DESCRIPTION
Microflashing®	304SS/EPDM	3" x 3" x 3/16" thick
Microflashing®	304SS/EPDM	4" x 4" x 3/16" thick
L-Foot	304SS - Stainless	See photos
QB2 Mounting Screw	5/16" x 4" 304SS	Into 1/4" predrilled holes

### SECTION 8

#### TEST RESULTS

The temperature during testing was 18-24°C (65-75°F). The results are tabulated as follows:

##### 3" Specimen With Sealant (three tested on asphalt shingle)

TITLE OF TEST	RESULTS	ALLOWED	NOTE
ASTM E331 (modified) @ 15.0psf	No leakage	No Leakage	1
ASTM E2140 (modified) @ 6" static water column	No leakage	No Leakage	2

##### 4" Specimen With Sealant (three tested on asphalt shingle)

TITLE OF TEST	RESULTS	ALLOWED	NOTE
ASTM E331 (modified) @ 15.0psf	No leakage	No Leakage	1
ASTM E2140 (modified) @ 6" static water column	No leakage	No Leakage	2

##### 3" Specimen Without Sealant (three tested on asphalt shingle)

TITLE OF TEST	RESULTS	ALLOWED	NOTE
ASTM E331 (modified) @ 15.0psf	No leakage	No Leakage	1
ASTM E2140 (modified) @ 6" static water column	No leakage	No Leakage	2



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**4" Specimen Without Sealant (three tested on asphalt shingle)**

TITLE OF TEST	RESULTS	ALLOWED	NOTE
ASTM E331 (modified) @ 15.0psf	No leakage	No Leakage	1
ASTM E2140 (modified) @ 6" static water column	No leakage	No Leakage	2

**Note 1:** The test was conducted for a period of 120 minutes

**Note 2:** The test was conducted for a period of 7 days

**End of test results.**

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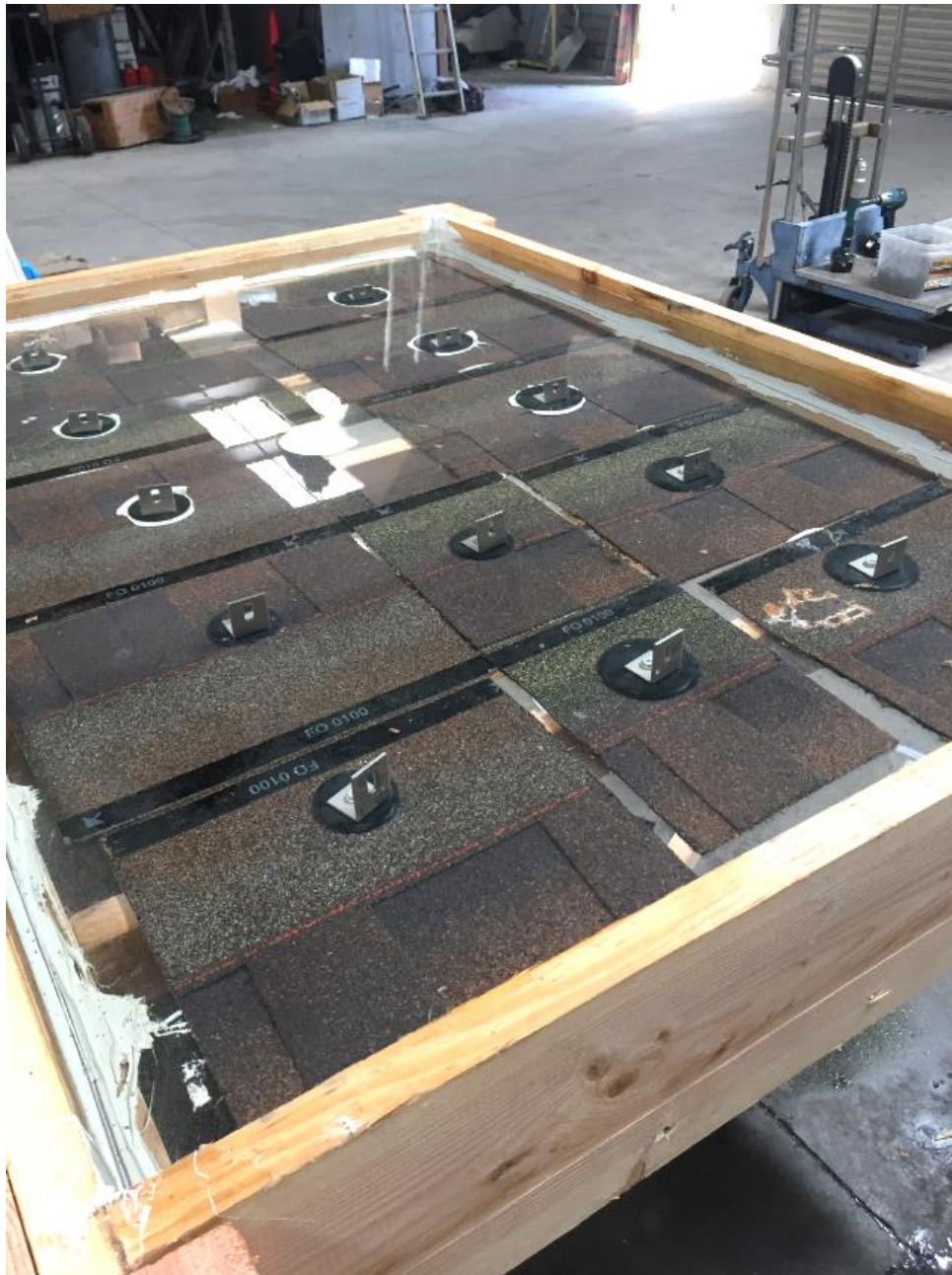
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### SECTION 9 PHOTOS



**Photo No. 1**  
**The specimen during ASTM E331 testing.**



**Photo No. 2**  
**ASTM E2140 testing**



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### SECTION 10

#### INSTALLATION INSTRUCTIONS

##### RECOMMENDED MATERIALS

- Rafter locator or Hammer
- Chalk or crayon
- 1/2" Nut Driver
- 7/32" Drill Bit
- EPDM Compatible Roofing Sealant – **Optional Based on Test Results Above.**

##### INSTALLATION INSTRUCTIONS

1. Locate and mark the rafters
2. Drill a pilot hole using a 7/32" drill bit
3. Place 1" sized droplet of EPDM compatible roofing sealant over the pilot hole – **Sealant Optional Based on Test Results Above.**
4. Place the Microflashing® over the pilot hole
5. Place L-Foot over the hole in Microflashing® and drive the 4" QB2 Lag Bolt through the L-foot and Microflashing® until tight.  
Recommended torque =150 Lbs/Inch





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**SECTION 11**

**PART LIST**

PN 17660 - 5/16 X 4.00 QB2 304SS

PN 17661 - L-Foot for QB2 304SS

PN 17669 - 3" Microflashing® 304 SS BLK

PN 17659 - 4" Microflashing® 304 SS BLK



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**SECTION 12**  
**REVISION LOG**

REVISION #	DATE	PAGES	REVISION
0	09/20/19	N/A	Original Report Issue