

F-WAVE ROOFING TEST REPORT

SCOPE OF WORK

FM 4475 VSH IMPACT RESISTANCE TESTING OF REVIA XTM AB CHARCOAL BLEND

REPORT NUMBER

S7038.01-801-44 R0

TEST DATE(S)

12/10/25 - 03/31/26

ISSUE DATE

04/02/26

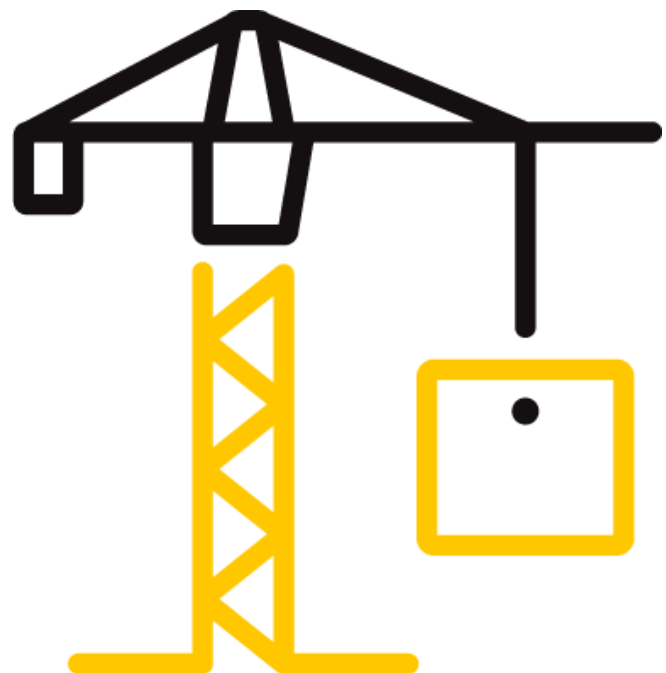
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DOCUMENT CONTROL NUMBER

RT-R-AMER-Test-2957 (11/28/22)

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TEST REPORT FOR F-WAVE ROOFING

Report No.: S7038.01-801-44 R0

Date: 04/02/26

REPORT ISSUED TO

F-WAVE ROOFING

921 S. Burlleson Blvd.
Burlleson, TX 76028

SECTION 1

SCOPE

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted by F-Wave Roofing, 921 S. Burlleson Blvd, Burlleson, TX to perform impact resistance testing in accordance with ANSI/FM 4475 (Modified Version of ANSI/FM 4473 For Very Severe Hail) on their Revia XTM AB Charcoal Blend. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at Intertek test facility in Plano, TX.

Unless differently required, Intertek reports apply the "Simple Acceptance" rule also called "Shared Risk approach," of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends four years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

SECTION 2

SUMMARY OF TEST RESULTS

Product Type: Synthetic Shingles

Series/Model: Revia XTM AB Charcoal Blend

Product Classification Achieved: Class VSH

For INTERTEK B&C:

COMPLETED BY: Jacob MacMaster

TITLE: Project Manager

SIGNATURE: 
Digitally Signed by: Jacob MacMaster

DATE: 04/02/26

REVIEWED BY: Jeffrey Crump FMPC

TITLE: Laboratory Manager

SIGNATURE: 
Digitally Signed by: Jeffrey Crump

DATE: 04/02/26

JM:jc

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TEST METHOD(S)

The specimens were evaluated in accordance with the following:

ANSI/FM 4475-2021 (Modified Version of ANSI/FM 4473 For Very Severe Hail), American National Standard for Impact Resistance Testing of Rigid Roofing Materials by Impacting with Freezer Ice

SECTION 4

MATERIAL SOURCE/INSTALLATION

Test specimens were provided by the client. The specimens were witnessed during production and tagged prior to shipment on 12/03/25. Representative samples of the test specimens will be retained by Intertek B&C for a minimum of four years from the test completion date.

Installation of the tested product was performed by the client. Tiles were placed on the test frame in overlapped weatherboard fashion and secured with 1" roofing nails located every 8". Tiles overlapped 8.5" at the bottom.

SECTION 5

EQUIPMENT

Cannon: Constructed from steel piping utilizing compressed air to propel the missile

Missile: 50.8 mm (2.0") diameter ice balls

Cannon Identification Number: 00549

Timing Device: Electronic Beam Type

Timing Device Calibration Date: 2/3/26

SECTION 6

LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Adan Ontiveros	F-Wave Roofing
Michael Krynicki	F-Wave Roofing
Jacob MacMaster	Intertek B&C

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TEST SPECIMEN DESCRIPTION

Product Type: Synthetic Shingle

Series/Model: Revia XTM AB Charcoal Blend

Color: Charcoal

Finish: N/A

Overall Assembly Size: 2298.7 mm (90.5") width by 673.1 mm (26.5") length

Nominal Thickness: 4.8 mm (0.18")

Tile Description:

Individual Tile Weight: 430.9 g (0.95 lb)

Individual Tile Size: 196.9 mm (7.75") width by 365.125 mm (14.375") length

Exposed Tile Size: 196.9 mm (7.75") width by 152.4 mm (6") length

Number of Tiles: 10 width by 3 length

Deck Construction

The wood test deck was 6' wide x 3' high and constructed with 2x4 pine construction lumber at the perimeter with two studs located at 24" centers. The test deck was covered with 15/32" thick plywood decking secured to the test deck with #6 x 1-5/8" screws located 2" from each end and on 6" centers.

Clips: No clips were utilized.

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SECTION 8

TEST RESULTS

FM 4475-2021 (Modified Version of ANSI/FM 4473 For Very Severe Hail), Ice Ball Impact Resistance

Test Unit #1 (No Weathering)

Test Date: 12/10/25

Sample Conditioning Temperature: 19°C (67°F) for at least 4 hours

Sample Conditioning Relative Humidity: 30% for at least 4 hours

Ice Ball Conditioning Temperature: -28°C (-18°F) for at least 48 hours

Muzzle Distance from Test Specimen: 1219.2 mm (48")

The ambient temperature during testing was 19°C (67°F). The results are tabulated as follows.

IMPACT	MISSILE VELOCITY m/s (fps)	ORIENTATION	WEIGHT g (lbs)	DIAMETER mm (in.)	ENERGY ft-lb	IMPACT AREA	OBSERVATIONS	RESULTS
1	47.1 (154.6)	15° of vertical	65.8 (0.145)	50.8 (2.0)	53.89	Bottom left corner, 2" from bottom	No visible cracking or breakage	Pass
2	46.7 (153.3)	15° of vertical	67.7 (0.149)	50.8 (2.0)	54.52	Bottom left corner, 2" from bottom	No visible cracking or breakage	Pass
3	48.8 (160.1)	15° of vertical	64.6 (0.142)	50.8 (2.0)	56.74	Top right corner, 2" from top	No visible cracking or breakage	Pass
4	49.4 (162)	15° of vertical	64.2 (0.142)	50.8 (2.0)	57.73	Top right corner, 2" from top	No visible cracking or breakage	Pass

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Test Unit #2 (1000 Hours UV)

Test Date: 2/10/26

Sample Conditioning Temperature: 21°C (70°F) for at least 4 hours

Sample Conditioning Relative Humidity: 55% for at least 4 hours

Ice Ball Conditioning Temperature: -28°C (-18°F) for at least 48 hours

Muzzle Distance from Test Specimen: 1219.2 mm (48")

The ambient temperature during testing was 21°C (70°F). The results are tabulated as follows.

IMPACT	MISSILE VELOCITY m/s (fps)	ORIENTATION	WEIGHT g (lbs)	DIAMETER mm (in.)	ENERGY ft-lb	IMPACT AREA	OBSERVATIONS	RESULTS
1	48 (157.4)	15° of vertical	65.7 (0.145)	50.8 (2.0)	55.77	Bottom left corner, 2" from bottom	No visible cracking or breakage	Pass
2	48 (157.4)	15° of vertical	67.5 (0.149)	50.8 (2.0)	57.30	Bottom left corner, 2" from bottom	No visible cracking or breakage	Pass
3	46.6 (153)	15° of vertical	67.9 (0.150)	50.8 (2.0)	54.46	Top right corner, 2" from top	No visible cracking or breakage	Pass
4	48.3 (158.6)	15° of vertical	64.1 (0.141)	50.8 (2.0)	55.25	Top right corner, 2" from top	No visible cracking or breakage	Pass

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Test Unit #3 (1000 Hours UV & 1000 Hours Heat)

Test Date 3/31/26

Sample Conditioning Temperature: 24°C (76°F) for at least 4 hours

Sample Conditioning Relative Humidity: 43% for at least 4 hours

Ice Ball Conditioning Temperature: -28°C (-18°F) for at least 48 hours

Muzzle Distance from Test Specimen: 1219.2 mm (48")

The ambient temperature during testing was 24°C (76°F). The results are tabulated as follows.

IMPACT	MISSILE VELOCITY m/s (fps)	ORIENTATION	WEIGHT g (lbs)	DIAMETER mm (in.)	ENERGY ft-lb	IMPACT AREA	OBSERVATIONS	RESULTS
1	49.3 (161.8)	15° of vertical	64.4 (0.142)	50.8 (2.0)	57.77	Bottom left corner, 2" from bottom	No visible cracking or breakage	Pass
2	48.4 (158.9)	15° of vertical	65.5 (0.144)	50.8 (2.0)	56.67	Bottom left corner, 2" from bottom	No visible cracking or breakage	Pass
3	47.3 (155.1)	15° of vertical	67 (0.148)	50.8 (2.0)	55.23	Top right corner, 2" from top	No visible cracking or breakage	Pass
4	47.7 (156.4)	15° of vertical	65.7 (0.145)	50.8 (2.0)	55.07	Top right corner, 2" from top	No visible cracking or breakage	Pass

**SECTION 9
CONCLUSION**

The sample tested met the performance requirements set forth in the referenced test procedures for a Class VSH.

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SECTION 10

SKETCH(ES)

intertek

Total Quality. Assured.

57038.01 - 801 - 44
Project Number Owner Discipline
F-Wave Roofing
Client

Project

Test Equipment:

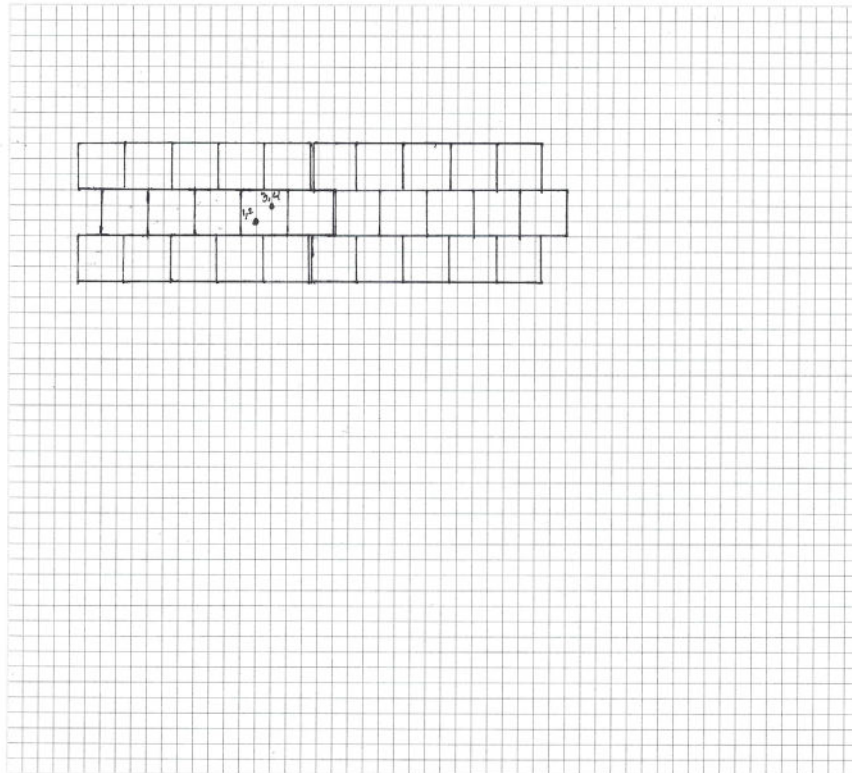
Asset #	Description	Cal Due

Test Data Sheet

Date
Jacob MacMaster
Technician(s)

Temperature Barometric Pressure

Asset #	Description	Cal Due



Sketch No. 1

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SECTION 11

PHOTOGRAPHS



Photo No. 1
Sample #1 Before Impacting



Photo No. 2
Sample #1 After Impacting

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Photo No. 3
Sample #2 Before Impacting

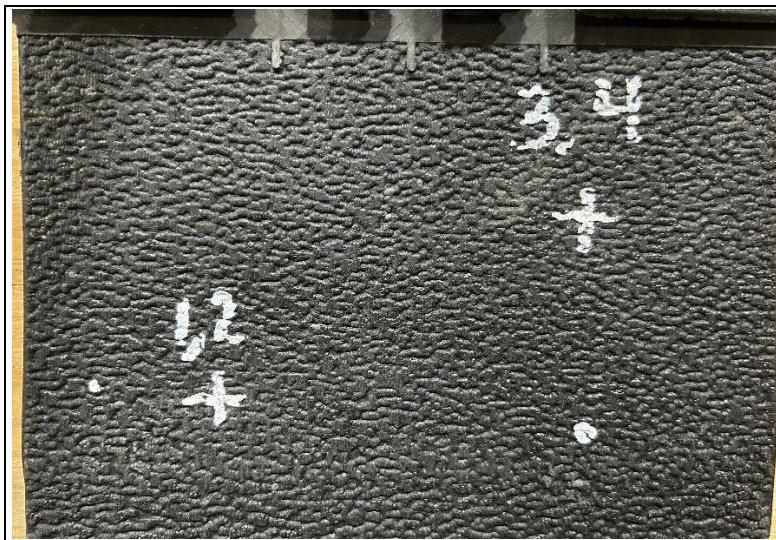


Photo No. 4
Sample #2 After Impacting

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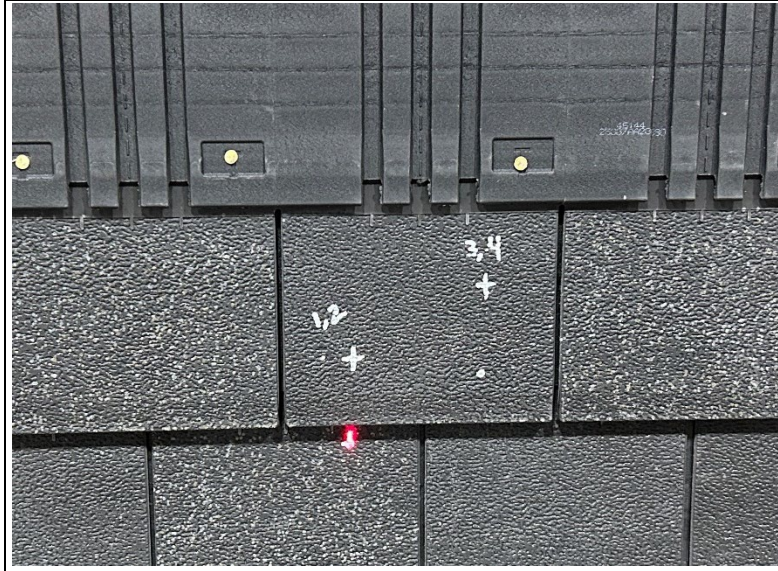


Photo No. 5
Sample #3 Before Impacting



Photo No. 6
Sample #3 After Impacting



Total Quality. Assured.

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SECTION 1

REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	04/02/26	N/A	Original Report Issue