

INNOBIT INDUSTRIES, LLC. FIRE TEST REPORT

SCOPE OF WORK

ASTM E108 CLASS A BURNING BRAND AND INTERMITTENT FLAME TESTING ON ROOF ASSEMBLY CONTAINING ISTIK SU40 WITH FACER BY GREENPRO UNDERLAYMENT AND GAF® ROYAL SOVEREIGN® 3 TAB SHINGLES.

REPORT NUMBER

Q2615.02-121-24 RO

TEST DATE(S)

07/12/23 - 07/13/23

ISSUE DATE

08/16/23

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TEST REPORT FOR INNOBIT INDUSTRIES, LLC.

Report No.: Q2615.02-121-24 R0

Date: 08/16/23

REPORT ISSUED TO

Innobit Industries LLC.

PO Box 3343, Umm Al Thoub, New Industrial Area Umm Al Quwain (United Arab Emirates)

Contact: Naveen Anthony E-mail: naveen@innobit.me

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by Innobit Industries LLC. to evaluate the fire performance of the assembly described in Section 5 of this report. Testing was conducted at the Intertek B&C test facility in York, Pennsylvania. Results obtained are tested values and were secured by using the designated test method. A summary of test results is reported herein and the complete assembly construction details are included in this report. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

SECTION 2

SUMMARY OF TEST RESULTS

DECK #	TYPE OF TEST	SLOPE	CLASSIFICATION	RESULTS
1	Burning Brand	5:12	Class A	Pass
2	Burning Brand	5:12	Class A	Pass
3	Burning Brand	5:12	Class A	Pass
4	Burning Brand	5:12	Class A	Pass
5	Intermittent Flame	5:12	Class A	Pass
6	Intermittent Flame	5:12	Class A	Pass

For INTERTEK B&C:

COMPLETED BY:	Timothy Feltman	REVIEWED BY:	Ethan Grove
TITLE:		TITLE:	Sr. Regional Manager – Fire
DEPARTMENT:	Technician – Fire Testing	DEPARTMENT:	Testing
SIGNATURE:		SIGNATURE:	
DATE:	08/16/23	DATE:	08/16/23
TRE III			

TRF:ddr

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TESTING AND EVALUATION METHODS

The samples were evaluated in accordance with the following:

ASTM E108-20a, Standard Test Methods for Fire Tests of Roof Coverings

The following test equipment was used to conduct the test.

ROOFING LAB EQUIPMENT	INVENTORY NUMBER	CALIBRATION DUE DATE
Data Acquisition/ Logger	63656	09-29-23
Anemometer	INT02439	06-13-24
Thermocouple	INT01652	09-07-23
Thermocouple Reader	INT243	07-11-24
Stopwatch	65100	07-20-24
Moisture Meter	INT962	01-29-24
Temp. Transmitter	65411	06-13-24
Benchtop Scale	INT00024	04-04-24

SECTION 4

MATERIAL SOURCE/INSTALLATION

The samples were randomly selected on 06/22/23 by Intertek representative Sam Sancho Thomas, at the Innobit Industries LLC. manufacturing facility, located at PO Box 3343, Plot No. 0281 & 2212, Area No. 01, Umm Al Thaob, New Industrial Area, Umm Al Quwain, UAE.

SECTION 5

SPECIMEN DESCRIPTION

The plywood decks were constructed by Intertek technicians according to the specifications of test standard ASTM E108, 2020a Edition, "Standard Test Methods for Fire Tests of Roof Coverings."

Moisture Content: Moisture content of the lumber was verified prior to testing to be within the limits of the standard.

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SECTION 5

SPECIMEN DESCRIPTION

The samples are described in more detail in the table below.

DECK #	DECK TYPE	DECK SURFACE	SYSTEM Systems are described in assembly from wood deck to top surface.
1-4	Class A BB	15/32" AC Grade, Group 1 exterior plywood	Plywood, iStik SU40 with facer by GreenPro underlayment, GAF® Royal Sovereign® 3-tab shingles.
5&6	Class A IF	15/32" AC Grade, Group 1 exterior plywood	Plywood, iStik SU40 with facer by GreenPro underlayment, GAF® Royal Sovereign® 3-tab shingles.

Storage Information: Decks were stored in the fire laboratory prior to testing. Typical laboratory conditions are 60-80°F and 50-65% relative humidity.

SECTION 6

LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Timothy Feltman	Intertek B&C

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SECTION 7

TEST RESULTS

Calibration Information

TEST CONDITIONS (CLASS A)	
Test Date	07/12/2023
Air Volocity	1082 average
Air Velocity	fpm
Slope of Cal. Deck	5:12
Ambient Air Temperature	76°F

TEST CONDITIONS (CLASS A)		
Test Date	07/13/2023	
Air Velocity	1075 average fpm	
Slope of Cal. Deck	5:12	
Average Flame Temperature	1356°F	
Ambient Air Temperature	78°F	

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TEST RESULTS

BURNING BRAND TESTS

Test Observations Deck: 1

Test Date	07/12/2023
Ambient Air Temperature	72°F
Brand Type	Class A, 4.5 lbs.
Slope of Test Deck	5:12

TIME (min:sec)	OBSERVATIONS
00:00	Brand placed on deck.
00:51	Sample ignition
03:44	Ignition in front of brand placement
05:41	Smoke at horizontal plywood joint
11:24	Discoloration of plywood at fasteners below horizontal
11.24	plywood joint
12:16	Dripping at horizontal plywood joint
24:12	Brand consumed
29:08	Smoke at vertical 2X4 below horizontal plywood joint
41:06	Glowing at vertical 2X4 below horizontal plywood joint
90:00	End of Test

Acceptance Level: Class A – No flaming occurred on the underside of the deck.

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TEST RESULTS

Test Observations Deck: 2

Test Date	07/12/2023
Ambient Air Temperature	79°F
Brand Type	Class A, 4.5 lbs.
Slope of Test Deck	5:12

TIME (min:sec)	OBSERVATIONS
00:00	Brand placed on deck.
00:59	Sample ignition
03:21	Ignition in front of brand placement
06:07	Smoke at horizontal plywood joint
11:33	Smoke at horizontal plywood joint and vertical 2X4
12:32	Dripping at horizontal plywood joint
14:21	Dripping at horizontal plywood joint and vertical 2X4
15:40	Plywood discoloration at vertical 2X4 below horizontal plywood joint
26:32	Brand consumed
32:37	Smoke at vertical 2X4 below horizontal plywood joint
32:58	Glowing at vertical 2X4 below horizontal plywood joint
90:00	End of Test

Acceptance Level: Class A – No flaming occurred on the underside of the deck.

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TEST RESULTS

Test Observations Deck: 3

Test Date	07/12/2023
Ambient Air Temperature	80°F
Brand Type	Class A, 4.4 lbs.
Slope of Test Deck	5:12

TIME (min:sec)	OBSERVATIONS		
00:00	Brand placed on deck.		
00:58	Sample ignition		
02:01	Ignition in front of brand placement		
04:41	Smoke at horizontal plywood joint		
06:27	Smoke at horizontal plywood joint and vertical 2X4		
08:48	Dripping at horizontal plywood joint and vertical 2X4		
10:41	Dripping at horizontal plywood joint		
13:46	Glowing at horizontal plywood joint and vertical 2X4; plywood discoloration below horizontal plywood joint		
23:41	Brand consumed		
42:38	No signs of combustion; End of Test		

Acceptance Level: Class A – No flaming occurred on the underside of the deck.

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TEST RESULTS

Test Observations Deck: 4

Test Date	07/12/2023
Ambient Air Temperature	82°F
Brand Type	Class A, 4.4 lbs.
Slope of Test Deck	5:12

TIME (min:sec)	OBSERVATIONS		
00:00	Brand placed on deck.		
01:01	Sample ignition		
03:23	Ignition in front of brand placement		
05:58	Smoke at horizontal plywood joint		
11:46	Dripping at horizontal plywood joint		
13:25	Plywood discoloration at vertical 2X4 below horizontal plywood joint		
15:29	Smoke from plywood below horizontal plywood joint		
20:47	Brand consumed		
24:36	Smoke at vertical 2X4 below horizontal plywood joint		
43:20	Glowing at vertical 2X4 below horizontal plywood joint		
80:25	No signs of combustion; End of Test		

Acceptance Level: Class A – No flaming occurred on the underside of the deck.

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TEST RESULTS

INTERMITTENT FLAME TESTS

Test Observations Deck: 5

Test Date	07/13/2023
Ambient Air Temperature	82°F
Slope of Test Deck	5:12

CYCLE Flame		Flame		
NO.	TIME.	ON/OFF	OBSERVATIONS/COMMENTS	
4	13:37	ON	Sample ignition	
4	14:14	OFF	Smoke at leading edge of underdeck	
4	14:31	OFF	Sample Extinguished	
5	16:03	ON	Dripping at horizontal plywood joint	
5	17:41	ON	Reignited	
5	18:24	OFF	Extinguished	
6	21:51	ON	Reignited	
6	22:17	OFF	Extinguished	
XXX	60:00	XXXXX	All flame cycles complete; start observation period	
XXX	74:24	XXXXX	No signs of combustion of the underdeck; End of Test	

Acceptance Level: Class A – No flaming occurred on the underside of the deck.

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TEST RESULTS

Test Observations Deck: 6

Test Date	07/13/2023
Ambient Air Temperature	85°F
Slope of Test Deck	5:12

CYCL	E	Flame		
NO.	TIME.	ON/OFF	OBSERVATIONS/COMMENTS	
3	14:06	OFF	Smoke at leading edge of underdeck	
5	17:55	ON	Sample ignition	
5	18:03	OFF	Extinguished	
6	21:57	ON	Reignited	
7	24:44	ON	Dripping at horizontal plywood joint	
10	39:37	OFF	Extinguished	
XXX	60:00	XXXXX	All flame cycles complete; start observation period	
XXX	71:02	XXXXX	No signs of combustion of the underdeck; End of Test	

Acceptance Level: Class A – No flaming occurred on the underside of the deck.

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SECTION 8



Photo No. 1 TEST #1 Pre-test



Photo No. 2
TEST #1 Underdeck Pre-test



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Photo No. 3 TEST #1 During Test



Photo No. 4
TEST #1 Underdeck During Test



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Photo No. 5 TEST #1 Post Test



Photo No. 6
TEST #1 Underdeck Post Test



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Photo No. 7 TEST #2 Pre-test



Photo No. 8
TEST #2 Underdeck Pre-test



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Photo No. 9 TEST #2 During Test



Photo No. 10
TEST #2 Underdeck During Test



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Photo No. 11 TEST #2 Post Test



Photo No. 12 TEST #2 Underdeck Post Test



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Photo No. 13 TEST #3 Pre-test



Photo No. 14 TEST #3 Underdeck Pre-test



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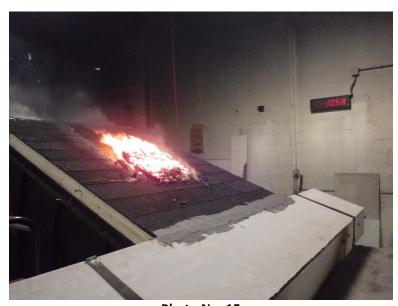


Photo No. 15 TEST #3 During Test



Photo No. 16
TEST #3 Underdeck During Test



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Photo No. 17 TEST #3 Post Test



Photo No. 18
TEST #3 Underdeck Post Test



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Photo No. 19 TEST #4 Pre-test



Photo No. 20 TEST #4 Underdeck Pre-test



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Photo No. 21 TEST #4 During Test



Photo No. 22 TEST #4 Underdeck During Test



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Photo No. 23 TEST #4 Post Test



Photo No. 24 TEST #4 Underdeck Post Test



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Photo No. 25 TEST #5 Pre-test



Photo No. 26 TEST #5 Underdeck Pre-test



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Photo No. 27 TEST #5 During Test



Photo No. 28
TEST #5 Underdeck During Test



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Photo No. 29 TEST #5 Post Test



Photo No. 30 TEST #5 Underdeck Post Test



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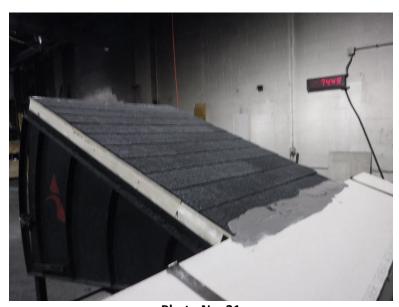


Photo No. 31 TEST #6 Pre-test



Photo No. 32 TEST #6 Underdeck Pre-test



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Photo No. 33 TEST #6 During Test



Photo No. 34
TEST #6 Underdeck During Test



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Photo No. 35 TEST #6 Post Test



Photo No. 36 TEST #6 Underdeck Post Test



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REVISION LOG

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