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SAFEWOOD DESIGNS
BALLISTICS PERFORMANCE TEST REPORT

SCOPE OF WORK
UL-752, LEVEL 3, BALLISTIC TESTING ON FIBERGLASS CLOTH MIXED WITH RESIN WALL PANEL

REPORT NUMBER
K4999.01-119-12 R0

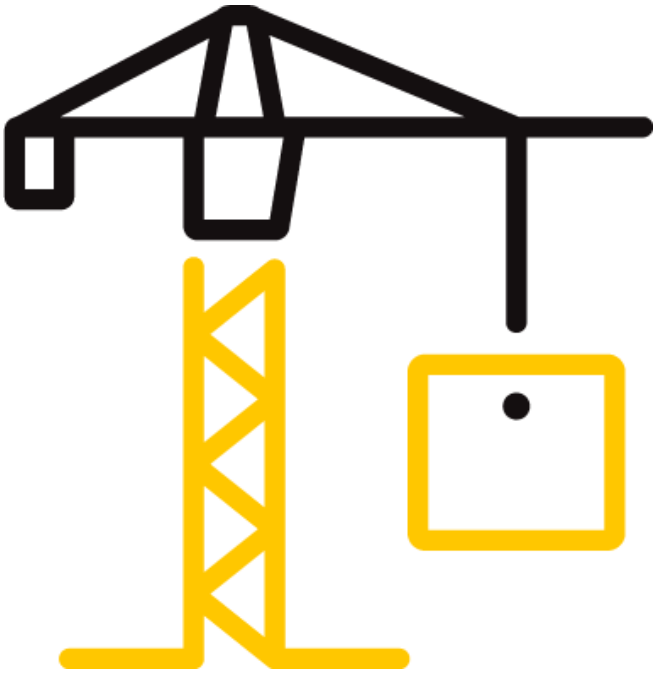
TEST DATE
04/13/21

ISSUE DATE
06/25/21

RECORD RETENTION END DATE
04/13/25

PAGES
16

DOCUMENT CONTROL NUMBER
RT-R-AMER-TEST-2788 (06/15/18)



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TEST REPORT FOR SAFEWOOD DESIGNS

Report No.: K4999.01-119-12 R0
Date: 06/25/21

REPORT ISSUED TO

SAFEWOOD DESIGNS
7281 Commerce Cir. W.
Fridley, MN 55432

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by SafeWood Designs, Fridley, PA, to perform ballistics resistance testing in accordance with UL-752, Level 3 on fiberglass cloth mixed with resin wall panel. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at the Intertek B&C test facility in York, Pennsylvania. Intertek B&C in York, Pennsylvania has demonstrated compliance with ISO/IEC International Standard 17025 and is consequently accredited as a Testing Laboratory (TL-144) by International Accreditation Service, Inc. (IAS). Intertek B&C is accredited to perform all testing reported herein.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

SECTION 2

SUMMARY OF TEST RESULTS

Product Type: 1/2" Fiberglass Cloth Mixed with Resin Wall Panel

TITLE	TEST SPECIMEN
Ballistic Resistance Level/Class	Level 3
Ballistic Resistance Test Result	Pass

For INTERTEK B&C:

COMPLETED BY:	Isaiah W. Gebhart	**REVIEWED BY:**	Travis A. Hoover
TITLE:	Ballistics Lead Technician	**TITLE:**	Program Manager
SIGNATURE:	Digitally Signed by: Isaiah Gebhart	**SIGNATURE:**	Travis A. Hoover/aaa Digitally Signed for: Travis Hoover by Amanda Ashby
DATE:	06/25/21	**DATE:**	06/25/21

IWG:tah/aas

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SECTION 3
TEST METHOD

Each test specimen was evaluated in accordance with the following:

> **UL-752**, *Bullet-Resisting Equipment*, Underwriters Laboratories, Inc., Eleventh Edition, September 2005 (Revised December 2015)

SECTION 4
MATERIAL SOURCE/INSTALLATION

The test specimen was provided by the client in good condition. Representative samples of the test specimen will be retained by Intertek B&C for a minimum of four years from the test completion date.

SECTION 5
EQUIPMENT

UL752, Level 3

Firearm: H&S Precision Universal Receiver (UR-01)
Test Ammunition: 44 Mag, 240 grain, lead semi-wadcutter gas checked
Velocity Range: 1350 - 1485 fps
Ballistic Screens: Oehler Model 57, infrared

SECTION 6
LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Travis A. Hoover	Intertek B&C
Isaiah W. Gebhart	Intertek B&C

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SECTION 7
TEST PROCEDURE

The sample was rigidly mounted for ballistics resistance testing. The muzzle of the test firearm was set at 15 feet from the sample at zero degree (±3°) obliquity. Ballistic screens were set at 5 feet and at 10 feet from the muzzle of the firearm. Per UL-752, Section 17.1.2, a 1/8" thick cardboard indicator was positioned 18" from the protected side of the specimen. Test ammunition was reloaded to conform to UL-752, Table 3.1 requirements.

SECTION 8
TEST SPECIMEN DESCRIPTION

PRODUCT TYPE	Wall panel
OVERALL SIZE	12" wide by 12" high
DESCRIPTION	1/2 in thick fiberglass cloth mixed with resin

SECTION 9
TEST RESULTS

Test Date*:* 04/13/21
Ambient Temperature*:* 66°F

The ballistic results are tabulated as follows:

Standard Temperature
Specimen No. 1

SHOT NO.	SHOT LOCATIONS	TEMP. (°F)	VELOCITY (fps)	RESULTS	PASS/FAIL
1	Triangle Pattern (top)	57	1409	No spalling on witness panel	Pass
2	Triangle Pattern (right)	57	1406	No spalling on witness panel	Pass
3	Triangle Pattern (left)	58	1431	No spalling on witness panel	Pass

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Outdoor Use Material - High Temperature
Specimen No. 2

SHOT NO.	SHOT LOCATIONS	TEMP. (°F)	VELOCITY (fps)	RESULTS	PASS/FAIL
1	Triangle Pattern (top)	109°F/ 70°F	1410	No spalling on witness panel	Pass
2	Triangle Pattern (right)	103°F/ 70°F	1387	No spalling on witness panel	Pass
3	Triangle Pattern (left)	96°F/ 70°F	1454	No spalling on witness panel	Pass

Standard Temperature
Specimen No. 3

SHOT NO.	SHOT LOCATIONS	TEMP. (°F)	VELOCITY (fps)	RESULTS	PASS/FAIL
1	Two Shot Pattern (left)	62	1391	No spalling on witness panel	Pass
2	Two Shot Pattern (right)	63	1378	No spalling on witness panel	Pass

Outdoor Use Material - Low Temperature
Specimen No. 4

SHOT NO.	SHOT LOCATIONS	TEMP. (°F)	VELOCITY (fps)	RESULTS	PASS/FAIL
1	Triangle Pattern (top)	43°F/ 64°F	1418	No spalling on witness panel	Pass
2	Triangle Pattern (left)	50°F/ 64°F	1435	No spalling on witness panel	Pass
3	Triangle Pattern (right)	52°F/ 64°F	1424	No spalling on witness panel	Pass

SECTION 10
CONCLUSION

The test specimens at standard temperature and outdoor use material temperature conditions, met the specified performance requirements of UL 752, Level 3.

All test specimens met the specified performance requirements per UL 752 standard.

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SECTION 11
PHOTOGRAPHS

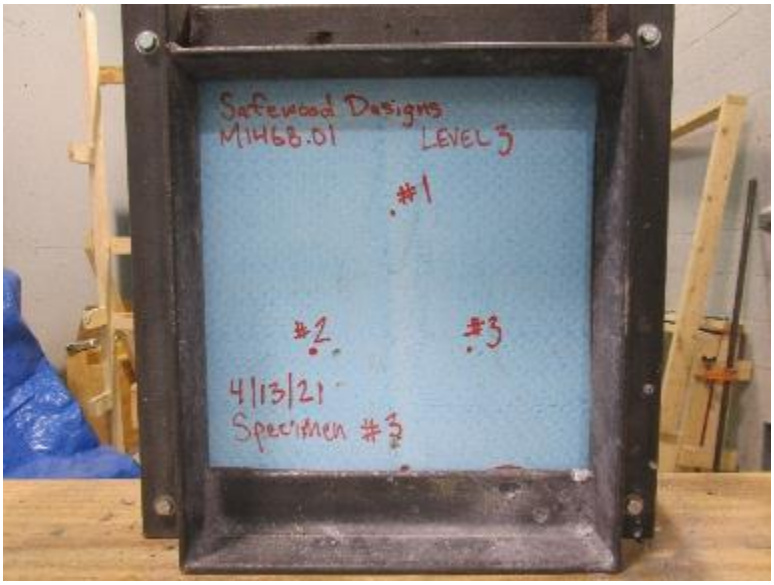

Photo No. 1
Specimen No. 1 (Standard Conditions), Pre-Test Exterior

Photo No. 2
Specimen No. 1 (Standard Conditions), Pre-Test Interior

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Photo No. 3
Specimen No. 1 (Standard Conditions), Post-Test Exterior

Photo No. 4
Specimen No. 1 (Standard Conditions), Post-Test Interior

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Photo No. 5
Specimen No. 1 (Standard Conditions), Post-Test Witness Panel

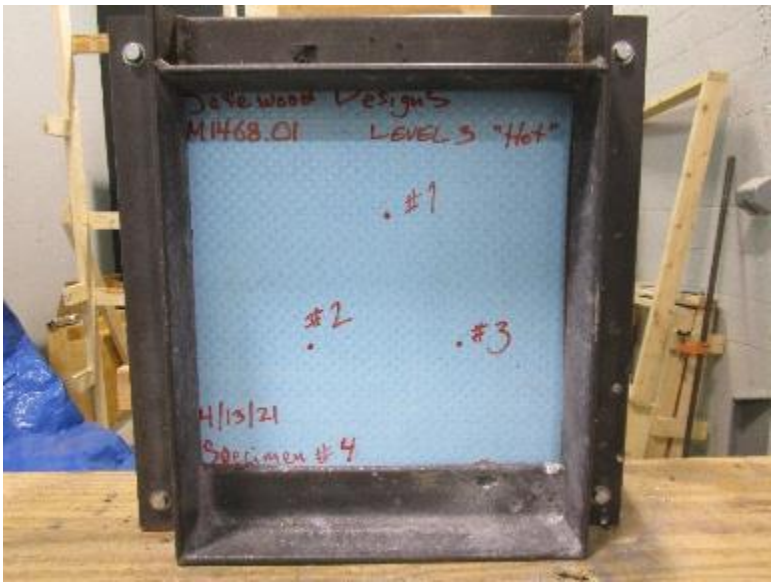

Photo No. 6
Specimen No. 2 (High Temperature Outdoor Use Conditions), Pre-Test Exterior

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Photo No. 7
Specimen No. 2 (High Temperature Outdoor Use Conditions), Pre-Test Interior

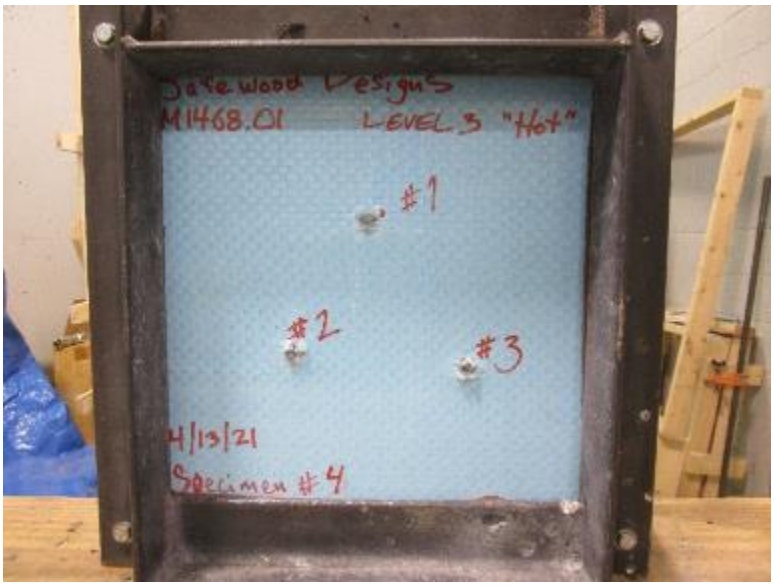

Photo No. 8
Specimen No. 2 (High Temperature Outdoor Use Conditions), Post-Test Exterior

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Photo No. 9
Specimen No. 2 (High Temperature Outdoor Use Conditions), Post-Test Interior

Photo No. 10
Specimen No. 2 (High Temperature Outdoor Use Conditions), Post-Test Witness Panel

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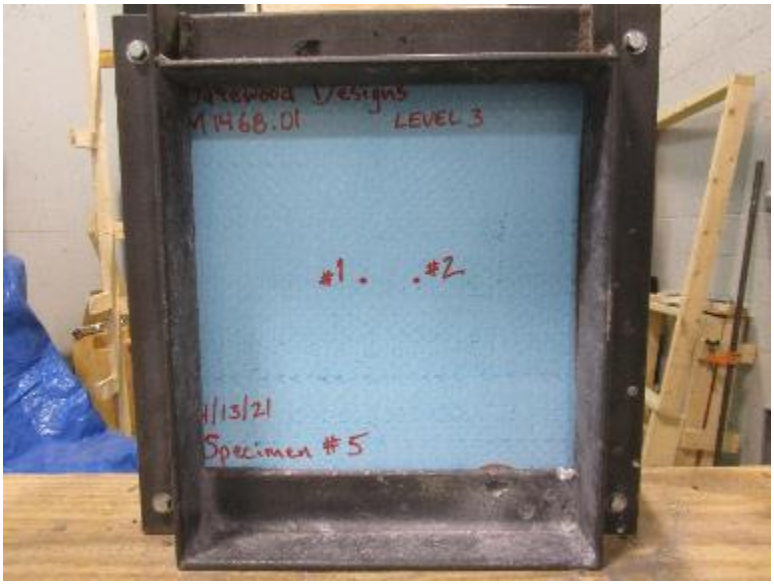

Photo No. 11
Specimen No. 3 (Standard Conditions), Pre-Test Exterior

Photo No. 12
Specimen No. 3 (Standard Conditions), Pre-Test Interior

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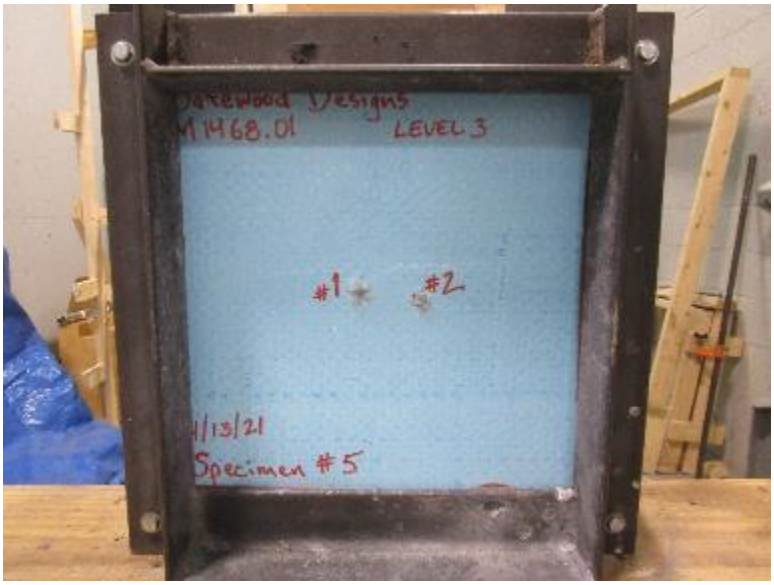

Photo No. 13
Specimen No. 3 (Standard Conditions), Post-Test Exterior

Photo No. 14
Specimen No. 3 (Standard Conditions), Post-Test Interior

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Photo No. 15
Specimen No. 3 (Standard Conditions), Post-Test Witness Panel

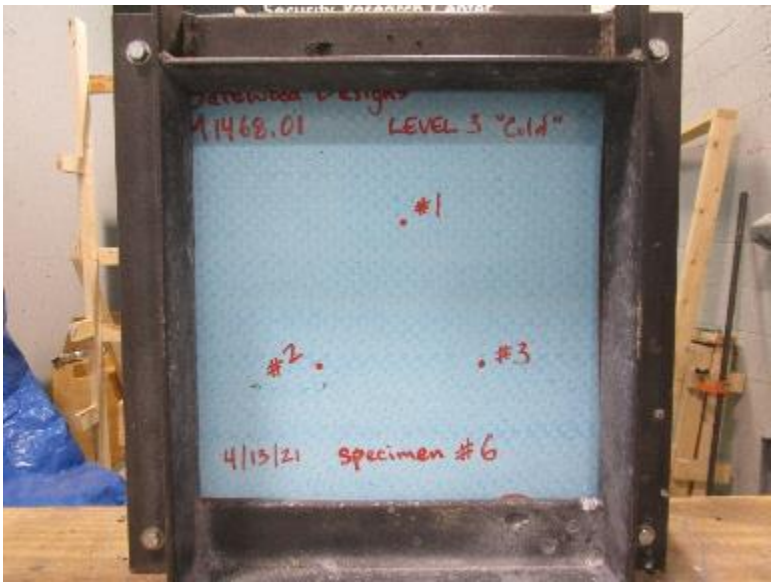

Photo No. 16
Specimen No. 4 (Low Temperature Outdoor Use Conditions), Pre-Test Exterior

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Photo No. 17
Specimen No. 4 (Low Temperature Outdoor Use Conditions), Pre-Test Interior

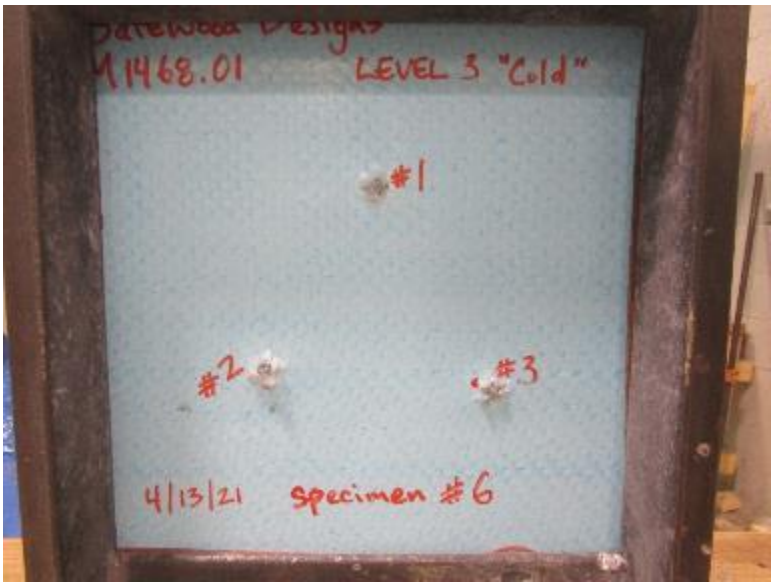

Photo No. 18
Specimen No. 4 (Low Temperature Outdoor Use Conditions), Post-Test Exterior

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Photo No. 19
Specimen No. 4 (Low Temperature Outdoor Use Conditions), Post-Test Exterior

Photo No. 20
Specimen No. 4 (Low Temperature Outdoor Use Conditions), Post-Test Witness Panel

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SECTION 12
REVISION LOG

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