

CLIENT: **Arbor Wood Company**
1025 London Road
Duluth, MN 55802

Test Report No: TUL0673

Date: December 7, 2023

SAMPLE ID: The test sample was identified as “**Ash Siding Panels**”.

SAMPLING DETAIL: Test samples were pulled from production at the clients manufacturing facility located at 914 Central St. West Bagley, MN 56621 on November 16, 2023 by Jason Friedrich a representative of QAI.

DATE OF RECEIPT: Samples were entered into our receiving system on November 30th, 2023.

TESTING DATE: December 1st, 2023

AUTHORIZATION: Proposal 23RT10232 approved on October 26th, 2023.

TEST PROCEDURE: Materials and Construction Methods for Exterior Wildfire Exposure, EXTERIOR WALL SIDING AND SHEATHING, SFM Standard 12-7A-1.

TEST RESULTS: The sample **DOES COMPLY** with the Conditions of Acceptance of SFM Standard 12-7A-1.11. Detailed test results are presented in the subsequent pages of this report.

Prepared By

**Signed for and on behalf of
QAI Laboratories, Inc.**



Scott Berry
Lab Supervisor - Fire

Jason Friedrich P.E.
Engineering Manager

Test Method:

The SFM 12-7A-1 test method evaluates the performance of exterior walls of structures when exposed to direct flames. A gas burner positioned at the center of the wall assembly test module. The wall assemblies test modules were constructed by QAI technicians at the Tulsa Lab. The wall assemblies were tested in a triplicate form per client request.

Sample Description:

A quantity of three wall panels, called **Ash Siding Panels**, the exterior wall assembly, measuring 96" x 48" x 4". **Ash Siding panels** which were installed on 7/16 OSB that was attached to Doug-Fir 2x4 framing on 16" centers per installation instructions using 16D nails spaced 6" on center on perimeter. There was a single 1/8" vertical joint place on the OSB. Tyvek WRB was placed on the 7/16" OSB and applied with Arrow T50 3/8" staples. The Ash Siding panels were placed directly on the wall assembly over the Tyvek WRB and installed with 6D siding nails.

Environmental Conditions at Time of Test:

Relative Humidity: 42%
 Temperature: 64°F
 Average moisture Content of samples: 6.61

Burner Verification:

The burner was verified per Section 2.2, 1. of the referenced standard prior to the start of this test series.

Effective Net Heat Release Rate: 150kW

Test Results

Test Number	Flame Penetration (Y / N)	Sustained Combustion (Y / N)	PASS/FAIL
1	N	N	PASS
2	N	N	PASS
3	N	N	PASS

General Observations for Test 1:

- 0:00 – Burner assembly ignited, 150 kW achieved and maintained.
- 00:50 – Charring
- 02:00 – Ignition of sample. Bottom right side above the thermal barrier.
- 05:00 – Flame going up both the right and left sides of the sample. Lite smoke.
- 10:00 – Burner assembly turned off. Small flame on the center, and right and left sides.
- 12:00 – Self extinguished. No active combustion.
- 30:00 - End of the test. No open combustion.

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General Observations for Test 2:

0:00 – Burner assembly ignited, 150 kW achieved and maintained.
00:20 – Charring.
02:00 – Ignition of sample at the bottom right corner above the thermal barrier.
05:00 – Embers behind siding $\frac{3}{4}$ of the way up on the right side.
10:00 – Gas burner off. Flames up the entire wall and behind the siding on the right side.
30:00 – Small flame at the thermal barrier, and lite smoke.
53:00 – End of the test. Ceramic fiber fell and allowed full penetration through to the backside going around the edge of the right side. All other areas of the sample self-extinguished. No actual penetration through to the backside during the test, making this test a pass.

General Observations for Test 3:

0:00 – Burner assembly ignited, 150 kW achieved and maintained.
00:20 – Charring present on most of the face of the test assembly
01:45 – Ignition of sample at the middle above the fire barrier.
05:00 – Flames on the right, left, and middle of the sample.
10:00 – Burner assembly turned off. No change in the flames.
20:00 – End of test. No open combustion.

Requirements:

- | | |
|--|-------------|
| 1. Absence of flame penetration through the wall assembly at any time. | PASS |
| 2. Absence of sustained flaming or glowing combustion of any kind at the conclusion of the 60-minute observation period. | PASS |

Deviations from Test Method:

Siding SFM 12-7A-1 requires triplicate testing for compliance.

Testing per client request was performed on 3 test assemblies by a QAI Technician.

Photos:

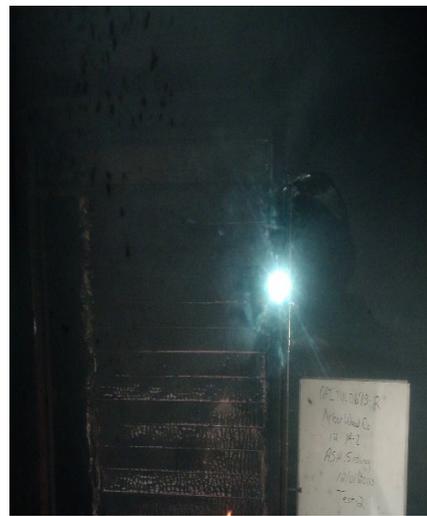
Test One Before	Test One After
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PHOTOS:

Test Two Before	Test Two After
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PHOTOS:

Test Three Before	Test Three After
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*****End of Report*****

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