

VISSCHER LUMBER INC.

TEST REPORT

REPORT ISSUED TO
Visscher Lumber Inc.
6545 Lickman Road
Chilliwack BC V2R 4A9 CAN

SCOPE OF WORK

Report of testing Vision Sidewall Shingle Panels for compliance with the applicable requirements of the following criteria: **SFM Standard 12-7A-1** – *Materials and Construction Methods for Exterior Wildfire Exposure – Exterior Wall Siding and Sheathing.*

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TEST REPORT FOR VISSCHER LUMBER INC.

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Date: January 15, 2021

CONCLUSION

The samples of Vision Sidewall Shingle Panels submitted by Visscher Lumber Inc. were tested in accordance with **SFM Standard 12-7A-1** – *Materials and Construction Methods for Exterior Wildfire Exposure – Exterior Wall Siding and Sheathing*.

The product test results are presented in Section 6 of this report.



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SECTION 2

OBJECTIVE

Intertek Testing Services NA Ltd. (Intertek) has conducted testing for Visscher Lumber Inc. on their Vision Sidewall Shingle Panels to evaluate flammability characteristics and the performance of exterior walls of structures when exposed to direct flames. Testing was conducted in accordance with **SFM Standard 12-7A-1 – Materials and Construction Methods for Exterior Wildfire Exposure – Exterior Wall Siding and Sheathing**. The purpose of this test was to measure the ability of the wall system to resist fire penetration from the exterior to the unexposed side of the test assembly under the conditions of exposure.

Testing was conducted and completed on January 13, 2021.

SECTION 3

SAMPLE SELECTION

Intertek representatives Baljeet Chung witnessed construction of the tested Vision Sidewall Shingle Panels on December 14, 2020 at the client's manufacturing facility, Panel Direct, facility located at 1353 Fairfield Rd., Cobble Hill, B.C, CA, V0R1L2. The inspector initialed cedar panels were received at the test facility on January 13, 2021. Samples were identified as "Vision Sidewall Shingle Panels".

SECTION 4

SAMPLE ASSEMBLY AND DESCRIPTION

The sample materials consisted of Shingle Cedar Panels that measured 48 in. long x 8-1/2 in. wide. Each Panels profile tapered from 1/2 in. to 1/8 in. and was installed with a 7 in. exposure pattern. Cedar shingles were applied over a 3/8 in. exterior grade plywood backing. Samples are produced under the identity of "Vision Sidewall Shingle Panels".

The test sample underwent the final stages of construction by Panel Direct technician Nolan Davis at the Intertek testing facility in Coquitlam in accordance with client's instruction. Intertek accepts no responsibility for any inaccuracies provided.

Wall Construction

Overall finished wall size measured 4 ft. x 8 ft. Single plate header, single bottom plate, and studs consisted of 2 in. x 4 in. SPF lumber spaced 16 in. on center and fastened with 3 in. common construction screws. Sheathing consisted of standard 1/2 in. exterior grade plywood fastened with 1-1/2 in. common screws spaced approximately 16 in. on center. A vertical joint measuring 1/8 in. was located along one of the studs in accordance with Section 5 of **SFM Standard 12-7A-1 – Materials and Construction Methods for Exterior Wildfire Exposure – Exterior Wall Siding and Sheathing**.

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Tyvek HomeWrap was stapled onto the plywood sheathing prior to cedar panel installation. Vision Sidewall Shingle Panels were screwed directly through sheathing with 1-1/2 in. common screws spaced with a total of three screws per panel, one on each end and one at the centre of each panel.

Unexposed Face

Unexposed face consisted of the empty cavities of the 16 in. on center studs and rear face of the exterior grade ½ in. plywood sheathing.

Exposed Face

Only product visible on the exposed face consisted of the Vision Sidewall Shingle Panels.

SECTION 5

TESTING AND EVALUATION METHODS

The Fire Test

The exterior wall siding and sheathing test was conducted in accordance with **SFM Standard 12-7A-1 – Materials and Construction Methods for Exterior Wildfire Exposure – Exterior Wall Siding and Sheathing**. Three (3) test specimens, measuring 4 ft. x 8 ft. (1.2 m x 2.4 m), were constructed to fit into the test apparatus.

A 4 in. x 39 in. (100 mm. x 1000 mm.) gas diffusion burner was calibrated to produce 150 ± 8 kW by using a calibrated gas mass flowmeter. The burner was placed on the test apparatus and centered with respect to the width of the assembly. The distance from the floor to the top of the burner was 12 in. (300 mm). The bottom of the test specimen was protected from burner fire exposure by the placement of a 4 ft. (1220 mm.) wide thermal barrier consisting of non-combustible cement board between the burner enclosure and the test specimen. The thermal barrier extended 3 in. above the top edge of the burner and was fastened to the base of the test specimen wall in such a manner to prevent obstruction of the burner flame caused by distortion away from the surface of the wall.

Non-combustible mineral wool was installed to prevent flame penetration where the edges of the test assembly meet the test apparatus assembly (including above the panel and along its vertical perimeters). All tests were conducted in ambient airflow conditions.

The burner was maintained in its test position until either flame penetration occurred or the 10 minute test period was completed. The exterior siding assembly was observed for an additional 60 minutes or until all combustion ceased.

The conditions of acceptance per SFM Standard 12-7A-1 are the following:

1. Absence of flame penetration through the wall assembly at any time
2. Absence of evidence of glowing combustion on the interior surface of the assembly at the end of the 70-minute test duration. *(Please refer to test observations for actual test durations).*

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SECTION 6**RESULTS AND OBSERVATIONS****Moisture Content**

Component	Moisture Content (%)	
	Sample 1	Sample 2
Structural Lumber (2x4 SPF)	11.3	11.6
Sheathing (1/2 in. ext. ply.)	7.9	7.8

Test Observations**Test 1**

Time	Observation
0:00	Start of test.
0:28	Crackling sounds and discolouration begin.
0:53	Ignition of surface.
2:11	Flaming spread along right side of sample.
4:20	Right side charred.
5:08	Ignition at centre of wall.
6:43	Left side ignition, spreading along wall.
10:00	Burning stopped. Flaming on sample remains.
11:50	Glowing remaining on surface. Smoke behind left stud on unexposed surface.
21:00	Minor glowing remaining on surface.
29:00	Only glowing remaining at mid-bottom area. Smoke remains.
34:24	No glowing on surface. Only smoke release.
39:30	Bottom right quadrant releasing smoke.
50:00	No change to unexposed surface. Warm to touch.
63:00	Smoke continues at bottom right. No change to unexposed surface.
70:00	End of test.

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Test 2

Time	Observation
0:00	Start of test.
0:48	Discolouration on surface.
1:15	Surface ignition.
4:24	90% of surface charred.
10:00	Flaming on surface continues after burner stopped.
14:30	Minor flaming remains on surface.
21:14	Minor glowing on surface.
26:28	Only smoke remaining on surface. Unexposed surface warm to touch.
42:00	Smoke reduced.
70:00	End of test.

Test 3

Time	Observation
0:00	Start of test.
0:41	Discolouration and popping.
3:04	Surface charred.
10:00	Flaming on surface continues after burner stopped.
12:17	Centre surface charred.
15:40	Flaming at mid-right.
28:29	Only smoke remains on surface.
40:00	Minor smoke remains. No change to unexposed surface.
48:00	Specimen stable. Light smoke.
58:00	All reactions stopped. End of test declared.

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(B) Test Results

Test	Requirement	Result
1	No evidence of glowing combustion at 70 minutes.	Pass
2		Pass
3		Pass

SECTION 7**CONCLUSION**

Intertek Testing Services NA (Intertek) has conducted testing for Visscher Lumber Inc. on their Vision Sidewall Shingle Panels to evaluate flammability characteristics and the performance of exterior walls of structures when exposed to direct flames. Testing was conducted in accordance with **SFM Standard 12-7A-1 – Materials and Construction Methods for Exterior Wildfire Exposure – Exterior Wall Siding and Sheathing**.

The conclusions of this test report may be used as part of the requirements for Intertek product certification. Authority to Mark must be issued for a product to become certified.

SECTION 8

APPENDIX A: TEST PICTURES (3 PAGES)

Test 1



Test 2



Test 3



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