

# HARDWOODS SPECIALTY PRODUCTS, US LP TEST REPORT

## SCOPE OF WORK

REPORT OF TESTING ON ECHO WOOD 2-S ON FIRE RATED MDF FOR COMPLIANCE WITH THE APPLICABLE REQUIREMENTS OF THE FOLLOWING CRITERIA: CAN/ULC S102-18, STANDARD METHOD OF TEST FOR SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS AND ASSEMBLIES.

## REPORT NUMBER

105462006COQ-002 R0

## TEST DATE(S)

07/19/23 - 07/19/23

## ISSUE DATE

07/26/23

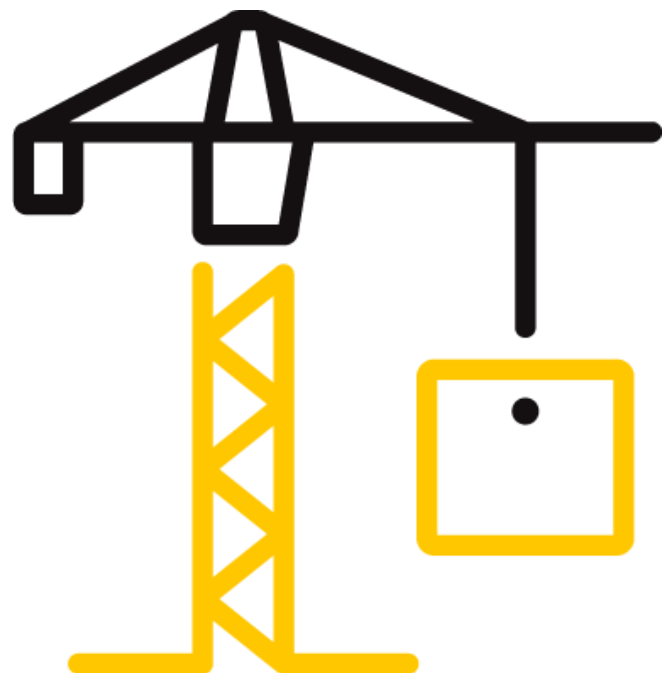
## PAGES

16

## DOCUMENT CONTROL NUMBER

GFT-OP-10c (09/29/20)

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## TEST REPORT FOR HARDWOODS SPECIALTY PRODUCTS, US LP

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Date: 07/26/23

### REPORT ISSUED TO

**HARDWOOD SPECIALTY PRODUCTS, US LP**

**17618 HARVILL AVENUE**

**PERRIS, CA 92570 USA**

### SECTION 1

#### SCOPE

Intertek Building & Construction (B&C) was contracted by Hardwoods Specialty Products, US LP 17618 Harvill Avenue Perris, CA 92570 USA. to perform testing in accordance with CAN/ULC S102-18, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies., on their Echo Wood EW12-1S Rift White Oak 2-s on Fire Rated MDF. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at Intertek Testing Services NA Ltd. (Intertek) test facility at 1500 Brigantine Drive Coquitlam, BC Canada.

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.

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 (where required by Certification or Accreditation bodies), or other pertinent project documentation, will be retained for the entire test record retention period.

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### SECTION 2

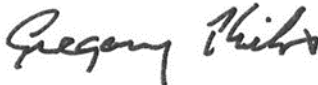
#### SUMMARY OF TEST RESULTS

The samples of ¾ inch Echo Wood EW12-1S Rift White Oak 2-s on Fire Rated MDF submitted by Hardwoods Specialty Products, US LP were tested in accordance with CAN/ULC S102-18, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.

The product test results are presented in Section 10 of this report.

For INTERTEK B&C:

<b>COMPLETED BY:</b>	Sean Fewer
<b>TITLE:</b>	Technician B&C
<b>SIGNATURE:</b>	
<b>DATE:</b>	07/26/23

<b>REVIEWED BY:</b>	Greg Philp
<b>TITLE:</b>	Reviewer- B&C
<b>SIGNATURE:</b>	
<b>DATE:</b>	07/26/23

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**SECTION 3**

**TEST METHOD(S)**

The specimens were evaluated in accordance with the following:

**CAN/ULC S102-18, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.**

**SECTION 4**

**MATERIAL SOURCE/INSTALLATION**

The client submitted panels to the Evaluation Center on June 16, 2023 (Coquitlam ID# VAN2306161253-001) The samples were received in good condition and were suitable for testing unless noted otherwise. The samples were not independently selected for testing.

**SECTION 5**

**EQUIPMENT**

ASSET #	DESCRIPTION	MODEL	CAL DUE DATE
WH2189	Photocell	Huygen 856	05/16/24
WH 2190	Smoke Opacity Meter	Huygen	05/16/24
WH 1052	Data Logger	Phidgets DAQ 2020	11/04/23
	FS Tunnel	N/A	03/20/24

**SECTION 6**

**LIST OF OFFICIAL OBSERVERS**

NAME	COMPANY
Sean Fewer	Intertek B&C

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**SECTION 7****TEST CALCULATIONS**

The results of the tests are expressed by indexes, which compare the characteristics of the sample under tests relative to that of select grade red oak flooring and inorganic-cement board.

**(A) Flame Spread Rating:**

This index relates to the rate of progression of a flame along a sample in the 7620 mm tunnel. A natural gas flame is applied to the front of the sample at the start of the test and drawn along the sample by a draft kept constant for the duration of the test. An observer notes the progression of the flame front relative to time.

The test apparatus is calibrated such that the flame front for red oak flooring passes out the end of the tunnel in five minutes, thirty seconds (plus or minus 15 seconds).

**(B) Smoke Developed:**

A photocell is used to measure the amount of light, which is obscured by the smoke passing down the tunnel duct. When the smoke from a burning sample obscures the light beam, the output from the photocell decreases. This decrease with time is recorded and compared to the results obtained for red oak, which is defined to be 100.

**SECTION 8****TEST SPECIMEN DESCRIPTION**

Upon receipt of the samples at the Intertek Coquitlam laboratory they were placed in a conditioning room where they remained in an atmosphere of  $23 \pm 3^{\circ}\text{C}$  ( $73.4 \pm 5^{\circ}\text{F}$ ) and  $50 \pm 5\%$  relative humidity.

The sample material was identified by the client as  $\frac{3}{4}$  in. thick by 4 ft. by 8 ft. Echo Wood EW12-1S Rift White Oak 2-s on Fire Rated MDF.

For each trial run, three  $\frac{3}{4}$  in. thick by 2 ft. wide by 8 ft. long sample panels were placed on the upper ledge of the flame spread tunnel to form the required 7315 mm sample length. A layer of 6 mm. reinforced cement board was placed over top of the samples, the tunnel lid was lowered into place, and the samples were then tested in accordance with CAN/ULC S102-18 at a room temperature of  $21^{\circ}\text{C}$  and 54% humidity.

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**SECTION 9****TEST RESULTS****(A) Flame Spread**

The resultant flame spread ratings are as follows:

(Rating rounded to nearest 5)

Echo Wood EW12-1S Rift White Oak 2-s on Fire Rated MDF	Flame Spread	Flame Spread Rating
Run 1	136	120
Run 3	95	
Run 3	122	

**(B) Smoke Developed**

The areas beneath the smoke developed curve and the related classifications are as follows:

(Classification rounded to nearest 5)

Echo Wood EW12-1S Rift White Oak 2-s on Fire Rated MDF	Smoke Developed	Smoked Developed Classification
Run 1	25	35
Run 2	39	
Run 3	37	

**Observations**

During the test runs, surface ignition occurred between 56 and 70 seconds. The flame then began to progress along the sample length until it reached the maximum flame spread. This was the case for all three test runs.

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**SECTION 10**

**CONCLUSION**

The samples of ¾ inch Echo Wood EW12-1S Rift White Oak 2-s on Fire Rated MDF submitted by Hardwoods Specialty Products US LP exhibited the following flame spread characteristics when tested in accordance with CAN/ULC S102-18, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.

A series of three test runs of material was conducted to conform to the requirements of the National Building Code of Canada.

Sample Material	Flame Spread Rating	Smoke Developed Classification
¾ inch Echo Wood EW12-1S Rift White Oak 2-s on Fire Rated MDF	120	35

The conclusions of this test report may not be used as part of the requirements for Intertek product certification. Authority to Mark must be issued for a product to become certified.



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**SECTION 11**

**TEST DATA (6 PAGES)**



## TEST REPORT FOR HARDWOODS SPECIALTY PRODUCTS, US LP

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### CAN/ULC S102-18 DATA SHEETS

#### Run 1

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**Standard:** ULC S102

Lab ID: Intertek Coquitlam Fire Laboratory  
Client: Hardwoods  
Date: 19 Jul 2023  
Project Number: 105462006  
Test Number: 1  
Operator: Sean Fewer

Specimen ID and Description:

Echowoods FR Core  
21C RH%54

#### TEST RESULTS

FLAMESPREAD INDEX: 136.000  
SMOKE DEVELOPED INDEX: 25.000

#### SPECIMEN DATA

Time to Ignition (sec): 55.765  
Time to Max Flame Spread (min): 3.213  
Maximum Flame Spread (mm): 5.940  
Time to 527 C / 980 F (sec): 0.000  
Max Temperature (deg F or C as per test standard): 520.040  
Time to Max Temperature (sec): 213.765  
Total Fuel Burned (cubic feet): 52.063  
  
Flame Spread\*Time Area (M\*min): 47.385  
Smoke Area (%A\*min): 37.678  
Unrounded FSI: 136.493  
Unrounded SDI: 25.193

#### CALIBRATION DATA

Time to Ignition of Last Red Oak (sec): 41  
Calibrated Smoke Area (%A\*min): 149.556

15 point Heptane average for E84  
5 point Red Oak average for S102

Tested by: SF

Reviewed by: gp

## TEST REPORT FOR HARDWOODS SPECIALTY PRODUCTS, US LP

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### CAN/ULC S102-18 DATA SHEETS

#### Run 1

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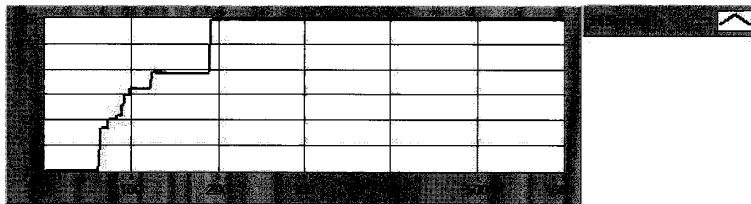
Client: Hardwoods

Project Number: 105462006

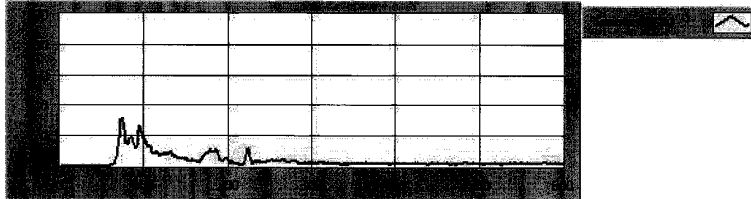
Test Number: 1

Test Standard: ULC S102

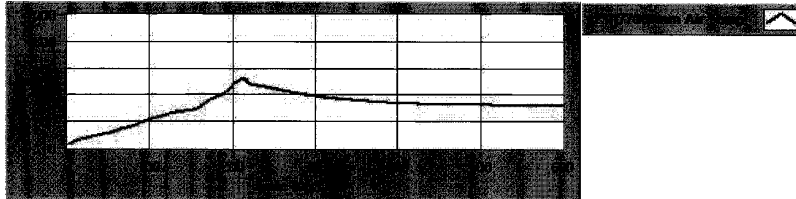
#### FLAME SPREAD



#### SMOKE (%A)



#### TEMPERATURE



Tested by: SF

Reviewed by: SP

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### CAN/ULC S102-18 DATA SHEETS

#### Run 2

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**Standard:** ULC S102

Lab ID: Intertek Coquitlam Fire Laboratory  
Client: Hardwoods  
Date: 19 Jul 2023  
Project Number: 105462006  
Test Number: 2  
Operator: Sean Fewer

Specimen ID and Description:

Echowoods FR core

#### TEST RESULTS

FLAMESPREAD INDEX: 95.000  
SMOKE DEVELOPED INDEX: 39.000

#### SPECIMEN DATA

Time to Ignition (sec): 65.974  
Time to Max Flame Spread (min): 4.283  
Maximum Flame Spread (mm): 5.940  
Time to 527 C / 980 F (sec): 4.550  
Max Temperature (deg F or C as per test standard): 627.120  
Time to Max Temperature (sec): 291.975  
Total Fuel Burned (cubic feet): 51.854

Flame Spread\*Time Area (M\*min): 42.122  
Smoke Area (%A\*min): 57.678  
Unrounded FSI: 94.919  
Unrounded SDI: 38.556

#### CALIBRATION DATA

Time to Ignition of Last Red Oak (sec): 41  
Calibrated Smoke Area (%A\*min): 149.556

15 point Heptane average for E84  
5 point Red Oak average for S102

Tested by: SF

Reviewed by: SP

## TEST REPORT FOR HARDWOODS SPECIALTY PRODUCTS, US LP

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### CAN/ULC S102-18 DATA SHEETS

#### Run 2

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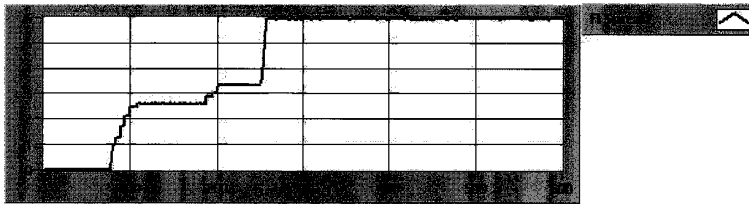
Client: Hardwoods

Project Number: 105462006

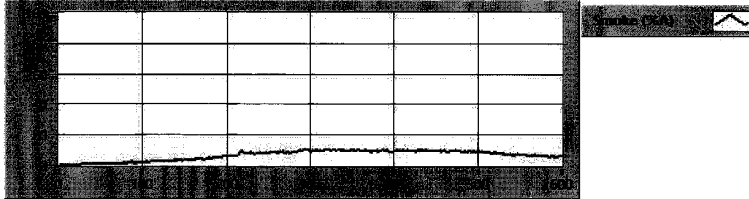
Test Number: 2

Test Standard: ULC S102

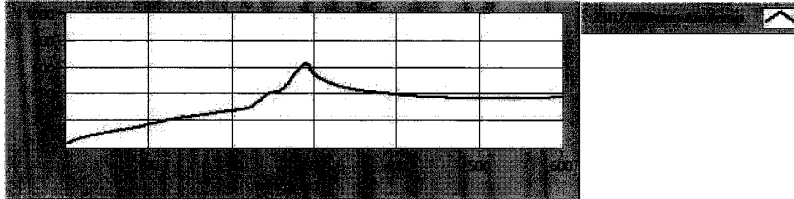
#### FLAME SPREAD



#### SMOKE (%A)



#### TEMPERATURE



Tested by: SF

Reviewed by: gp

## TEST REPORT FOR HARDWOODS SPECIALTY PRODUCTS, US LP

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### CAN/ULC S102-18 DATA SHEETS

#### Run 3

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**Standard:** ULC S102

Lab ID: Intertek Coquitlam Fire Laboratory

Client: Hardwoods

Date: 19 Jul 2023

Project Number: 105462006

Test Number: 3

Operator: Sean Fewer

Specimen ID and Description:

Echowoods FR Core

#### TEST RESULTS

FLAMESPREAD INDEX: 122.000

SMOKE DEVELOPED INDEX: 37.000

#### SPECIMEN DATA

Time to Ignition (sec): 69.876

Time to Max Flame Spread (min): 3.115

Maximum Flame Spread (mm): 5.940

Time to 527 C / 980 F (sec): 0.000

Max Temperature (deg F or C as per test standard): 351.580

Time to Max Temperature (sec): 195.876

Total Fuel Burned (cubic feet): 51.915

Flame Spread\*Time Area (M\*min): 45.916

Smoke Area (%A\*min): 55.781

Unrounded FSI: 121.625

Unrounded SDI: 37.295

#### CALIBRATION DATA

Time to Ignition of Last Red Oak (sec): 41

Calibrated Smoke Area (%A\*min): 149.556

15 point Heptane average for E84  
5 point Red Oak average for S102

Tested by: SF

Reviewed by: ef

## TEST REPORT FOR HARDWOODS SPECIALTY PRODUCTS, US LP

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### CAN/ULC S102-18 DATA SHEETS

#### Run 3

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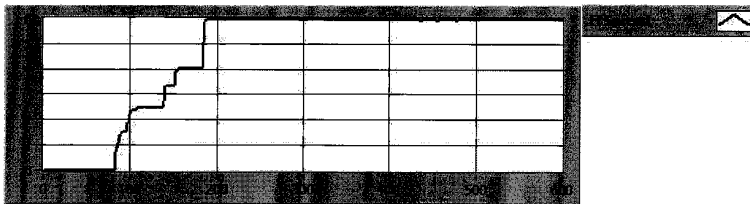
Client: Hardwoods

Project Number: 105462006

Test Number: 3

Test Standard: ULC S102

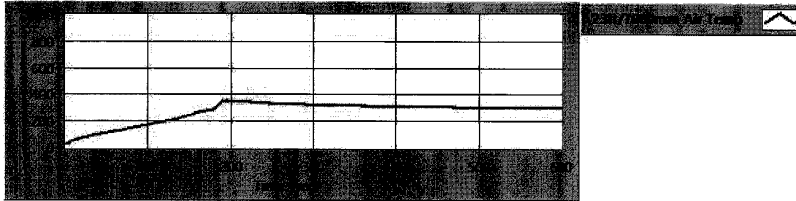
#### FLAME SPREAD



#### SMOKE (%A)



#### TEMPERATURE



Tested by: SF

Reviewed by: ep

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### SECTION 12

#### PHOTOGRAPHS



**Photo No. 1**  
**Pre-Test**



**Photo No. 2**  
**Post Test**

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### SECTION 13

#### REVISION LOG

REVISION #	DATE	SECTION	REVISION
0	07/26/23	N/A	Original Report Issue