

# HARDWOODS SPECIALTY PRODUCTS US LP TEST REPORT

## SCOPE OF WORK

REPORT OF TESTING ECHO WOOD 2-S ON FIRE RATED MDF FOR COMPLIANCE WITH THE APPLICABLE REQUIREMENTS OF THE FOLLOWING CRITERIA: ASTM E84-21A STANDARD TEST METHOD FOR SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS.

## REPORT NUMBER

105462006COQ-001A R0

## TEST DATE(S)

07/20/23 - 07/20/23

## ISSUE DATE

07/26/23

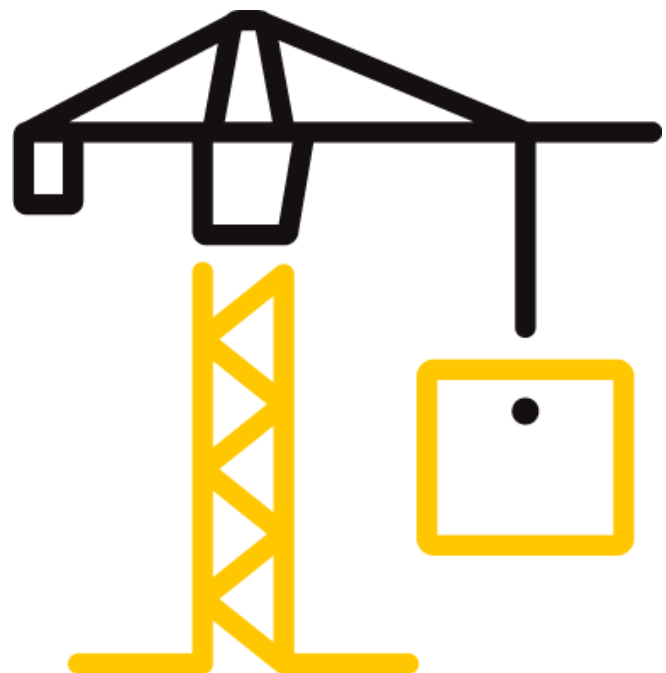
## PAGES

12

## DOCUMENT CONTROL NUMBER

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

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## TEST REPORT FOR HARDWOODS SPECIALTY PRODUCTS US LP

Report No.: 105462006COQ-001A R0

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 ASTM E84-21a Standard Test Method for Surface Burning Characteristics of Building Materials 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 in Coquitlam, BC Canada.

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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 ASTM E84-21a Standard Test Method for Surface Burning Characteristics of Building Materials.

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

For INTERTEK B&C:

<b>COMPLETED BY:</b>	Sean Fewer	<b>REVIEWED BY:</b>	Greg Philp
<b>TITLE:</b>	Technician – B&C	<b>TITLE:</b>	Reviewer – B&C
<b>SIGNATURE:</b>		<b>SIGNATURE:</b>	
<b>DATE:</b>	07/26/23	<b>DATE:</b>	07/26/23

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### SECTION 3

#### TEST METHOD(S)

The specimens were evaluated in accordance with the following:

ASTM E84-21a Standard Test Method for Surface Burning Characteristics of Building Materials.

### 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
WH 2189	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 (E84)	N/A	11/17/24

### 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 Index:

This index relates to the rate of progression of a flame along a sample in the 25 foot 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 heptane, 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 this trial run, 24 in. wide by 24 ft. length of sample material was placed on the upper ledge of the flame spread tunnel. 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 ASTM E84-21a. Standard Test Method for Surface Burning Characteristics of Building Materials at a room temperature of  $73^{\circ}\text{F}$  and 53% humidity.

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

The resultant flame spread Indexes are as follows:  
(Indexes rounded to nearest 5)

Sample Material	Flame Spread	Flame Spread Index
Echo Wood EW12-1S Rift White Oak 2-s on Fire Rated MDF	107	105

**(B) Smoke Developed**

The areas beneath the smoke developed curve and the related indexes are as follows:  
(For smoke developed indexes 200 or more, index is rounded to the nearest 50. For smoke developed indexes less than 200, index is rounded to nearest 5)

Sample Material	Smoke Developed	Smoke Developed Index
Echo Wood EW12-1S Rift White Oak 2-s on Fire Rated MDF	33	35

**(C) Observations**

During the test, the sample surface ignited at approximately 61 seconds; the flame began to progress along the sample until it reached the maximum flame spread.

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### COMMENTARY ON CLASSIFICATION

Neither ASTM E84 nor UL 723 include classification criteria for the results obtained from testing. The International Building Code® (IBC), NFPA 101: Life Safety Code® (NFPA 101), and NFPA 5000: Building Construction and Safety Code® (NFPA 5000) all describe a set of classification criteria required for interior wall and ceiling finish materials based on Flame Spread Index and Smoke Developed Index when tested in accordance with ASTM E84 or UL 723. The classification criteria for all three model codes is the same:

Class	Flame Spread Index	Smoke Developed Index
A	0-25	0-450
B	26-75	0-450
C	76-200	0-450

Note that classification under this scheme for interior wall and ceiling finishes does not strictly apply to all products or materials tested in accordance with ASTM E84 or UL 723 because not all products or materials are recommended or suitable for use as interior wall or ceiling finish materials in buildings, regardless of the surface burning characteristics. Consult with the product manufacturer and the local authority having jurisdiction (AHJ) regarding specific applications of a given product or material.

### SECTION 10 CONCLUSION

The samples ¾ inch Echo Wood EW12-1S Rift White Oak 2-s on Fire Rated MDF by Hardwoods Specialty Products, US LP exhibited the following flame spread characteristics when tested in accordance with ASTM E84-21a Standard Test Method for Surface Burning Characteristics of Building Materials

Sample Material	Flame Spread Index	Smoke Developed Index
Echo Wood EW12-1S Rift White Oak 2-s on Fire Rated MDF	105	35

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



Total Quality. Assured.

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1500 Brigantine Drive  
Coquitlam, BC V3K 7C1

Telephone: 604-520-3321  
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**SECTION 11**

**TEST DATA (2 PAGES)**



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### ASTM E84-21a DATA SHEETS

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**Standard:** ASTM E84/UL723

Lab ID: Intertek Coquitlam Fire Laboratory  
Client: Hardwoods  
Date: 20 Jul 2023  
Project Number: 105462006  
Test Number: 1  
Operator: Sean Fewer

Specimen ID and Description:

Echowoods FR Core  
23C RH% 53

#### TEST RESULTS

FLAMESPREAD INDEX: 105.000  
SMOKE DEVELOPED INDEX: 35.000

#### SPECIMEN DATA

Time to Ignition (sec): 60.810  
Time to Max Flame Spread (min): 3.497  
Maximum Flame Spread (mm): 19.500  
Time to 527 C / 980 F (sec): 3.880  
Max Temperature (deg F or C as per test standard): 1183.820  
Time to Max Temperature (sec): 250.809  
Total Fuel Burned (cubic feet): 51.918

Flame Spread\*Time Area (M\*min): 149.118  
Smoke Area (%A\*min): 22.218  
Unrounded FSI: 106.795  
Unrounded SDI: 33.441

#### CALIBRATION DATA

Time to Ignition of Last Red Oak (sec): 47

Calibrated Smoke Area (%A\*min): 66.439

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

Tested by: SF

Reviewed by: SP

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## ASTM E84-21a DATA SHEETS

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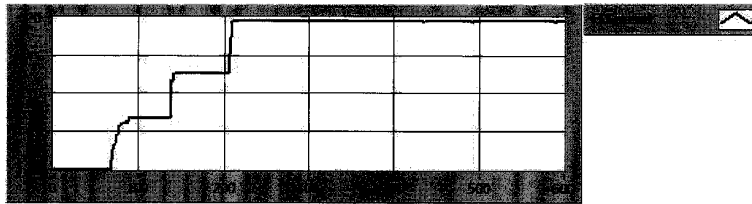
Client: Hardwoods

Project Number: 105462006

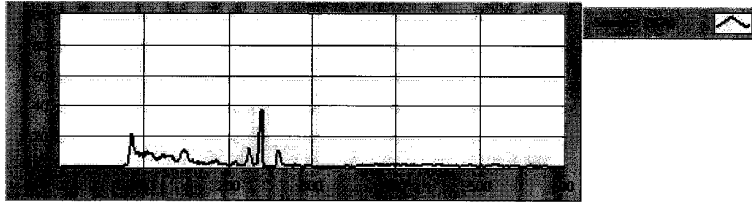
Test Number: 1

Test Standard: ASTM E84/UL723

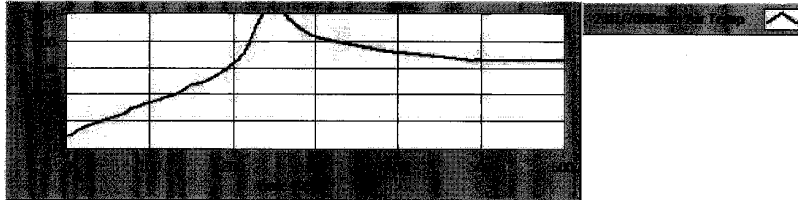
### FLAME SPREAD



### SMOKE (%A)



### TEMPERATURE



Tested by: SF

Reviewed by: SP

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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	PAGES	REVISION
0	07/26/23	N/A	Original Report Issue