

# ZENOVA LTD. TEST REPORT

## SCOPE OF WORK

REPORT OF TESTING 1.3 MIL THICK ZENOVA FP COATING APPLIED TO 5/8 IN. THICK PLYWOOD 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

104390380COQ-001 R0

## TEST DATE(S)

07/29/20 - 07/29/20

## ISSUE DATE

08/10/20

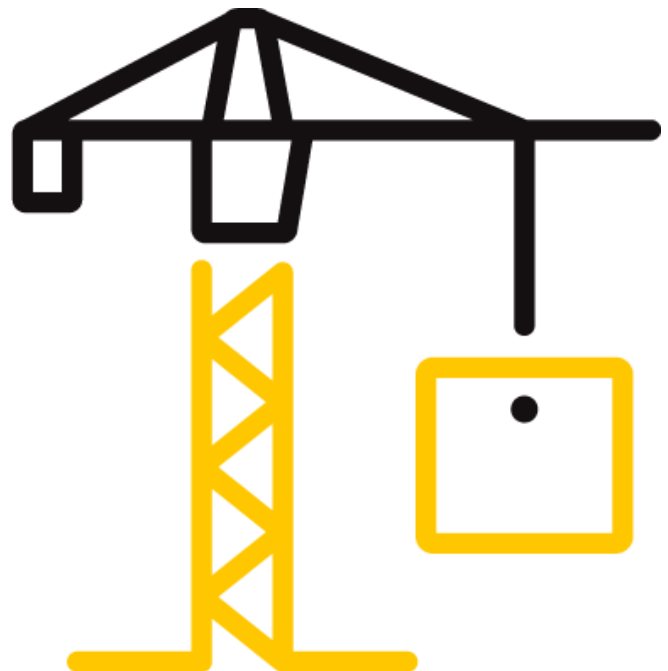
## PAGES

15

## DOCUMENT CONTROL NUMBER

GFT-OP-10c (AUGUST 27, 2018)

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## TEST REPORT FOR ZENOVA LTD.

Report No.: 104390380COQ-001 R0

Date: 08/10/20

### REPORT ISSUED TO

ZENOVA LTD.

15A SHENFIELD ROAD

BRENTWOOD, ESSEX CM15 8AG GBR

### SECTION 1

#### SCOPE

Intertek Building & Construction (B&C) was contracted by Zenova Ltd. 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 1.3 mil thick Zenova FP coating applied to 5/8 in. thick plywood. 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.

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



### SECTION 2

#### SUMMARY OF TEST RESULTS

The samples of 1.3 mil thick Zenova FP coating applied to 5/8 in. thick plywood submitted by Zenova Ltd. 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>	Greg Philp	<b>REVIEWED BY:</b>	Kal Kooner
<b>TITLE:</b>	Technician – B&C	<b>TITLE:</b>	Reviewer- B&C
<b>SIGNATURE:</b>		<b>SIGNATURE:</b>	
<b>DATE:</b>	08/10/20	<b>DATE:</b>	08/10/20

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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**

Samples were submitted to Intertek directly from the client and were not independently selected for testing and Intertek accepts no responsibility for any inaccuracies provided.

**SECTION 5****EQUIPMENT**

ASSET #	DESCRIPTION	MODEL	CAL DUE DATE
WH2189	Photocell	Huygen 856	02/28/21
WH 2190	Smoke Opacity Meter	Huygen	02/28/21
WH 1052	Data Logger	Phidgets DAQ 2020	02/28/21

**SECTION 6****LIST OF OFFICIAL OBSERVERS**

NAME	COMPANY
Greg Philp	Intertek B&C
Graeme Sargent	Zenova Ltd.

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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 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 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 consisted of a 1.3 mil thick Zenova FP coating applied to 5/8 in. thick plywood. Sample panels received from the client measured 24 in. wide by 8 ft. long by 5/8 in. thick.

For each trial run, three 24 in. wide by 8 ft. long sample panels were placed on the upper ledge of the flame spread tunnel to form the required 24 ft. 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.

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

The resultant flame spread ratings are as follows:

(Rating rounded to nearest 5)

Zenova FP coating applied to 5/8 in. thick plywood	Flame Spread	Flame Spread Rating
Run 1	7	10
Run 2	11	
Run 3	9	

**(B) Smoke Developed**

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

(Classification rounded to nearest 5)

Zenova FP coating applied to 5/8 in. thick plywood	Smoke Developed	Smoke Developed Classification
Run 1	64	70
Run 2	72	
Run 3	80	

**(C) Observations**

During the test runs, surface ignition occurred between 138 and 257 seconds; the flame then began to progress along the sample length until it reached the maximum flame spread.

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**SECTION 10****CONCLUSION**

The samples of 1.3 mil thick Zenova FP coating applied to 5/8 in. thick plywood submitted by Zenova Ltd. 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
Zenova FP coating applied to 5/8 in. thick plywood	10	70

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.



Total Quality. Assured.

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Date: 08/10/20

1500 Brigantine Drive  
Coquitlam, BC V3K 7C1

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**SECTION 11**

**TEST DATA (6 PAGES)**

**TEST REPORT FOR ZENOVA LTD.**

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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: Zenova Ltd  
Date: 29 Jul 2020  
Project Number: 104690380  
Test Number: 1  
Operator: Greg Philp

Specimen ID and Description:

Zenova FP Coating applied to 5/8 in. thick Plywood

**TEST RESULTS**

FLAMESPREAD INDEX: 7.000  
SMOKE DEVELOPED INDEX: 64.000

**SPECIMEN DATA**

Time to Ignition (sec): 256.750  
Time to Max Flame Spread (min): 7.596  
Maximum Flame Spread (mm): 1.030  
Time to 527 C / 980 F (sec): 0.000  
Max Temperature (deg F or C as per test standard): 316.880  
Time to Max Temperature (sec): 594.749  
Total Fuel Burned (cubic feet): 44.404  
  
Flame Spread\*Time Area (M\*min): 3.778  
Smoke Area (%A\*min): 101.929  
Unrounded FSI: 6.989  
Unrounded SDI: 64.227

**CALIBRATION DATA**

Time to Ignition of Last Red Oak (sec): 44  
Calibrated Smoke Area (%A\*min): 158.700

15 point Heptane average for E84-19b  
5 point Red Oak average for S102

Tested by: 

Reviewed by: 



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## CAN/ULC S102-18 DATA SHEETS

### Run 1

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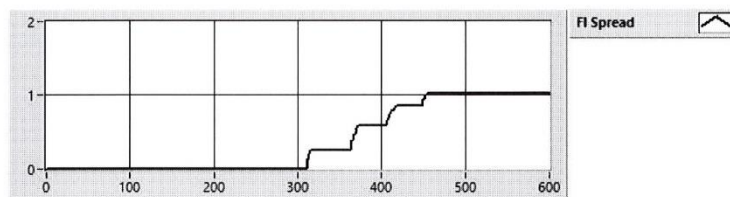
Client: Zenova Ltd

Project Number: 104690380

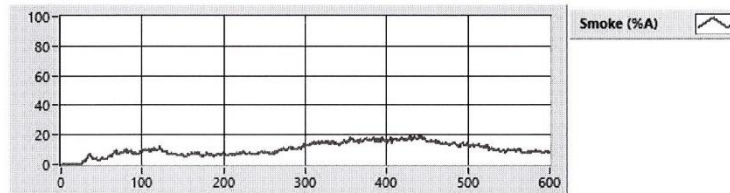
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Test Standard: ULC S102

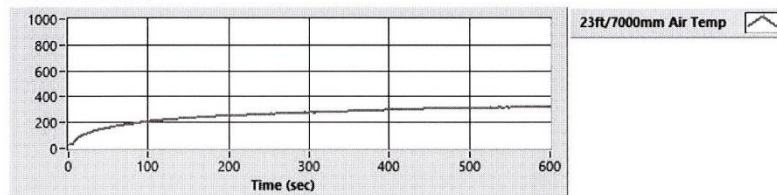
#### FLAME SPREAD



#### SMOKE (%A)



#### TEMPERATURE



Tested by: 

Reviewed by: 

**TEST REPORT FOR ZENOVA LTD.**

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**CAN/ULC S102-18 DATA SHEETS****Run 2**

Page 1 of 2

**Standard:** ULC S102

Lab ID: Intertek Coquitlam Fire Laboratory

Client: Zenova Ltd

Date: 29 Jul 2020

Project Number: 104390380

Test Number: 2

Operator: Greg Philp

Specimen ID and Description:

Zenova FP applied to 5/8 in. thick Plywood

**TEST RESULTS**

FLAMESPREAD INDEX: 11.000

SMOKE DEVELOPED INDEX: 72.000

**SPECIMEN DATA**

Time to Ignition (sec): 138.416

Time to Max Flame Spread (min): 9.907

Maximum Flame Spread (mm): 1.260

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

Max Temperature (deg F or C as per test standard): 334.530

Time to Max Temperature (sec): 596.416

Total Fuel Burned (cubic feet): 44.458

Flame Spread\*Time Area (M\*min): 5.866

Smoke Area (%A\*min): 113.648

Unrounded FSI: 10.852

Unrounded SDI: 71.612

**CALIBRATION DATA**

Time to Ignition of Last Red Oak (sec): 44

Calibrated Smoke Area (%A\*min): 158.700

15 point Heptane average for E84-19b  
5 point Red Oak average for S102Tested by: Reviewed by: 

## TEST REPORT FOR ZENOVA LTD.

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## CAN/ULC S102-18 DATA SHEETS

### Run 2

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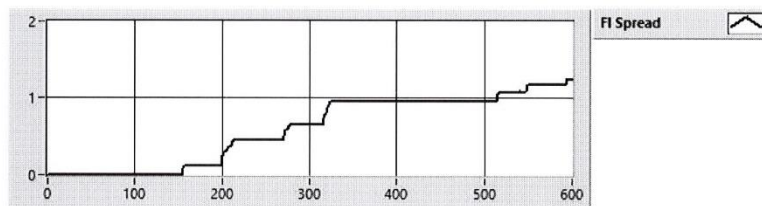
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Project Number: 104390380

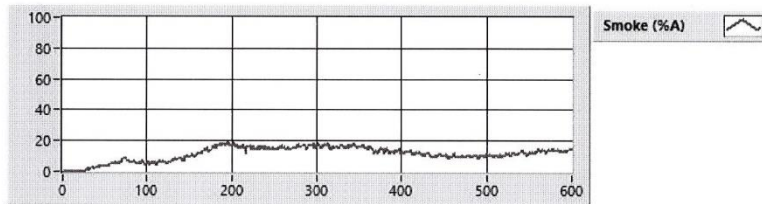
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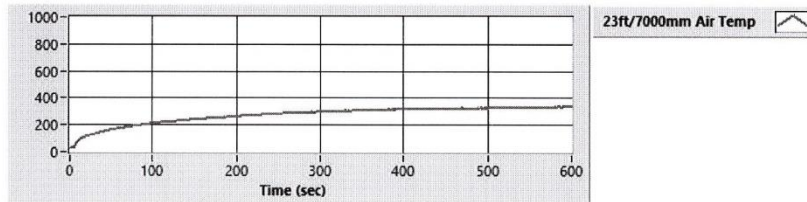
#### FLAME SPREAD



#### SMOKE (%A)



#### TEMPERATURE



Tested by: \_\_\_\_\_

Reviewed by: \_\_\_\_\_

**TEST REPORT FOR ZENOVA LTD.**

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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: Zenpva Ltd  
Date: 29 Jul 2020  
Project Number: 104390380  
Test Number: 3  
Operator: Greg Philp

Specimen ID and Description:

Zenova FP Coating applied to 5/8 in. thick plywood

**TEST RESULTS**

FLAMESPREAD INDEX: 9.000  
SMOKE DEVELOPED INDEX: 80.000

**SPECIMEN DATA**

Time to Ignition (sec): 193.512  
Time to Max Flame Spread (min): 8.959  
Maximum Flame Spread (mm): 1.180  
Time to 527 C / 980 F (sec): 0.000  
Max Temperature (deg F or C as per test standard): 329.690  
Time to Max Temperature (sec): 594.512  
Total Fuel Burned (cubic feet): 44.510  
  
Flame Spread\*Time Area (M\*min): 4.791  
Smoke Area (%A\*min): 126.300  
Unrounded FSI: 8.864  
Unrounded SDI: 79.584

**CALIBRATION DATA**

Time to Ignition of Last Red Oak (sec): 44  
Calibrated Smoke Area (%A\*min): 158.700

15 point Heptane average for E84-19b  
5 point Red Oak average for S102

Tested by: Reviewed by: 

## TEST REPORT FOR ZENOVA LTD.

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## CAN/ULC S102-18 DATA SHEETS

### Run 3

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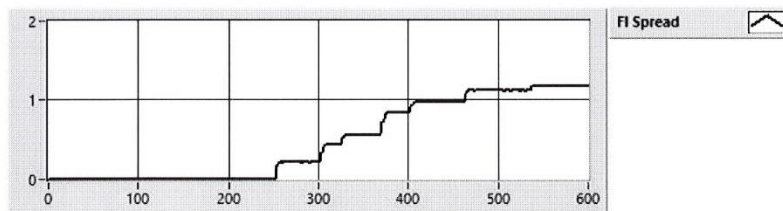
Client: Zenpva Ltd

Project Number: 104390380

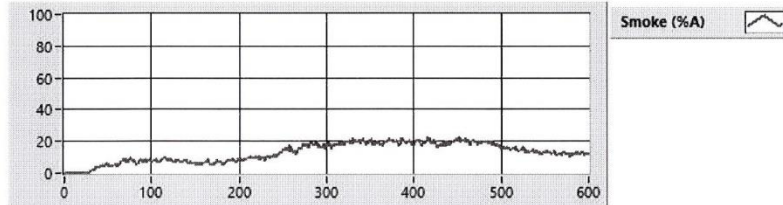
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Test Standard: ULC S102

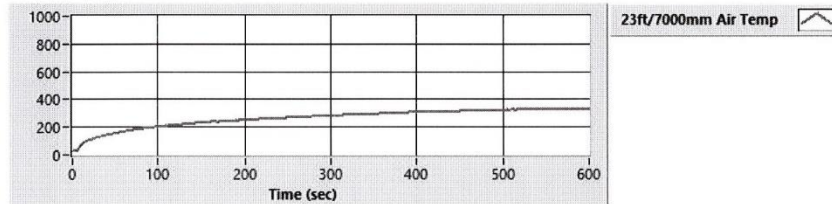
#### FLAME SPREAD



#### SMOKE (%A)



#### TEMPERATURE



Tested by: \_\_\_\_\_

Reviewed by: \_\_\_\_\_

## TEST REPORT FOR ZENOVA LTD.

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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	08/10/20	N/A	Original Report Issue