

POLILAM NEW MATERIAL (JIANGSU) CO, LTD. TEST REPORT

SCOPE OF WORK

REPORT OF TESTING HIGH PRESSURE DECORATIVE LAMINATE (HPDL) FOR COMPLIANCE WITH THE APPLICABLE REQUIREMENTS OF THE FOLLOWING CRITERIA: ASTM E84-20 STANDARD TEST METHOD FOR SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS.

REPORT NUMBER

104634008COQ-001 R0

TEST DATE(S)

04/20/21 - 04/20/21

ISSUE DATE

04/21/21

PAGES

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SECTION 2

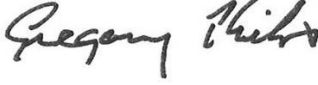
SUMMARY OF TEST RESULTS

The samples of their High-Pressure Decorative Laminate (HPDL)submitted by PoliLam New Material (Jiangsu) Co. Ltd. were tested in accordance with ASTM E84-20 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:

COMPLETED BY:	Sean Fewer
TITLE:	Technician – B&C
SIGNATURE:	
DATE:	04/21/21

REVIEWED BY:	Greg Philp
TITLE:	Senior Technician – B&C
SIGNATURE:	
DATE:	04/21/21

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SECTION 3

TEST METHOD(S)

The specimens were evaluated in accordance with the following:

ASTM E84-20 Standard Test Method for Surface Burning Characteristics of Building Materials.

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
WH 2189	Photocell	Huygen 856	11/06/21
WH 2190	Smoke Opacity Meter	Huygen	11/06/21
WH 1052	Data Logger	Phidgets DAQ 2020	11/06/21
	FS Tunnel (E84)	N/A	02/23/22

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 as High-Pressure Decorative Laminate (HPDL). Each sample measured 0.035 in. thick by 24 in. wide by 8 ft. long.

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. The sample material was supported by $\frac{1}{4}$ in. steel rods spaced every 24 in. and 20 ga. 2 in x 2 in galvanized steel netting spanning 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 E84-20. Standard Test Method for Surface Burning Characteristics of Building Materials.

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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
High Pressure Decorative Laminate (HPDL)	0	0

(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	Smoked Developed Index
High Pressure Decorative Laminate (HPDL)	129	130

(C) Observations

During the test, there was no visible surface ignition.

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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 High Pressure Decorative Laminate (HPDL) submitted by PoliLam New Material (Jiangsu) Co. Ltd. exhibited the following flame spread characteristics when tested in accordance with ASTM E84-20 Standard Test Method for Surface Burning Characteristics of Building Materials

Sample Material	Flame Spread Index	Smoked Developed Index
High Pressure Decorative Laminate (HPDL)	0	130

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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SECTION 11

TEST DATA (2 PAGES)

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ASTM E84-20 DATA SHEETS

Page 1 of 2

Standard: ASTM E84-20/UL723

Lab ID: Intertek Coquitlam Fire Laboratory
Client: Polilam
Date: 20 Apr 2021
Project Number: 104634008
Test Number: 1
Operator: Sean Fewer

Specimen ID and Description:

HPL Laminate

TEST RESULTS

FLAMESPREAD INDEX: 0.000
SMOKE DEVELOPED INDEX: 130.000

SPECIMEN DATA

Time to Ignition (sec): 0.000
Time to Max Flame Spread (min): 0.000
Maximum Flame Spread (mm): 0.000
Time to 527 C / 980 F (sec): 0.000
Max Temperature (deg F or C as per test standard): 457.304
Time to Max Temperature (sec): 599.301
Total Fuel Burned (cubic feet): 43.966

Flame Spread*Time Area (M*min): 0.000
Smoke Area (%A*min): 80.933
Unrounded FSI: 0.000
Unrounded SDI: 128.704

CALIBRATION DATA

Time to Ignition of Last Red Oak (sec): 48
Calibrated Smoke Area (%A*min): 62.883

15 point Heptane average for E84-20
5 point Red Oak average for S102

Tested by: SF

Reviewed by: SF

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ASTM E84-20 DATA SHEETS

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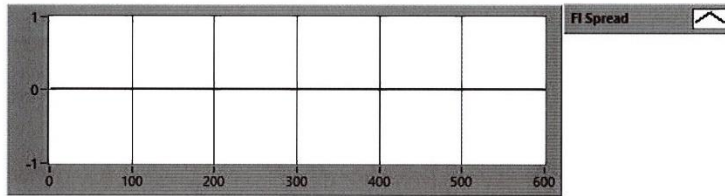
Client: Polilam

Project Number: 104634008

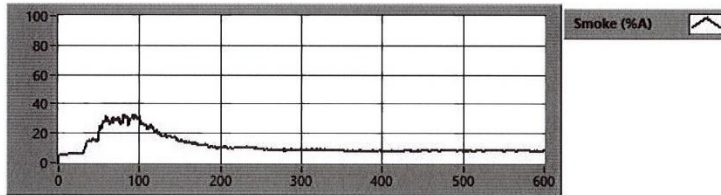
Test Number: 1

Test Standard: ASTM E84-20/UL723

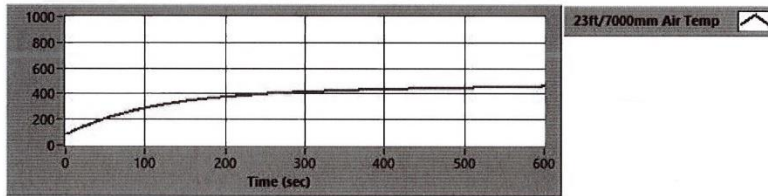
FLAME SPREAD



SMOKE (%A)



TEMPERATURE



Tested by: SF

Reviewed by: [Signature]

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SECTION 12

PHOTOGRAPHS



Photo No. 1
Pre Test

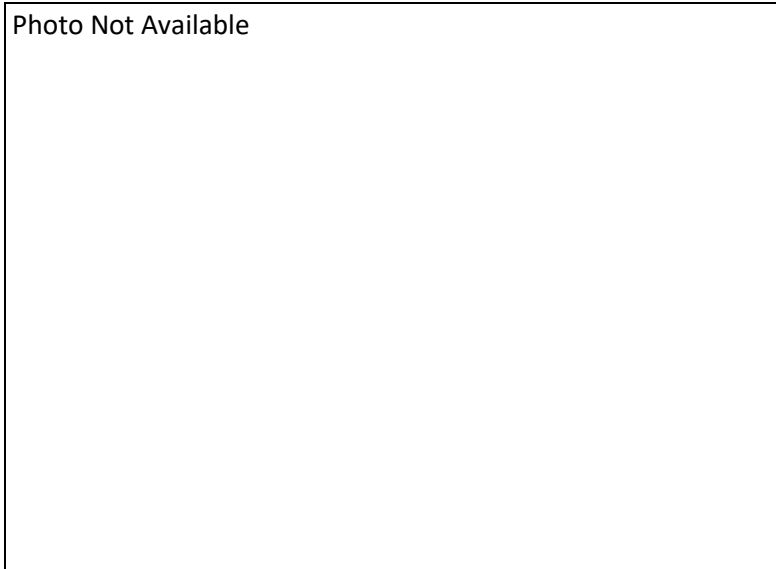


Photo No. 2
Post Test



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REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	04/21/21	N/A	Original Report Issue