TEST REPORT

REPORT NUMBER: 100900037COQ-002
ORIGINAL ISSUE DATE: October 10, 2012

EVALUATION CENTER
Intertek Testing Services NA Ltd.
1500 Brigantine Drive
Coquitlam, BC V3K 7C1

RENDERED TO

Laminam S.P.A.
Via Ghiarola Nuova 258
41042-Fiorano Modenese
Italy

PRODUCT EVALUATED: Laminam 3+ Porcelain Tile with Fibreglass Backing
EVALUATION PROPERTY: Surface Burning Characteristics

Report of testing Laminam 3+ porcelain tile with fibreglass backing for compliance with the applicable requirements of the following criteria: ASTM E84-12a, *Standard Test Method for Surface Burning Characteristics of Materials*

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REVISION SUMMARY

2 Introduction

Intertek Testing Services NA Ltd. (Intertek) has conducted testing for Laminam S.P.A. to evaluate the surface burning characteristics of Laminam 3+ porcelain tile with fibreglass backing. Testing was conducted in accordance with the standard methods of ASTM E84-12a, *Standard Test Method for Surface Burning Characteristics of Materials*.

This evaluation began October 9, 2012 and was completed the same day.

3 Test Samples

3.1. SAMPLE SELECTION

Samples were submitted to Intertek directly from the client and were not independently selected for testing. The sample materials were received at the Evaluation Center on September 18, 2012.

3.2. SAMPLE AND ASSEMBLY 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 ± 3°C (73.4 ± 5°F) and 50 ± 5% relative humidity.

The sample material was described by the client as 3mm thick Grés porcelain with a 0.4mm thick fiberglass backing, and was identified as Laminam 3+. The tiles measured 24 in. wide by 5 ft. and 10 ft. lengths and had a light brown coloured porcelain face.

For each trial run, two 10 ft. long and one 5 ft. long by 24 in. wide sample tiles were butted together and placed on the upper ledge of the flame spread tunnel to form the required 24 ft. sample length, with the porcelain face oriented toward the flame. 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 E84-12a.

4 Testing and Evaluation Methods

4.1. TEST STANDARD

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 Classification:

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.

5 Testing and Evaluation Results

5.1. RESULTS AND OBSERVATIONS

(A) Flame Spread

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

Laminam 3+ Porcelain Tile with Fibreglass Backing	Flame Spread	Flame Spread Classification
Run 1	2	0
Run 2	0	0

(B) Smoke Developed

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

Laminam 3+ Porcelain Tile with Fibreglass Backing	Smoke Developed	Smoked Developed Classification
Run 1	14	15
Run 2	14	15

(C) Observations

Surface ignition occurred at 223 and 250 seconds.

6 Conclusion

The Laminam 3+ porcelain tile with fibreglass backing, submitted by Laminam S.P.A., exhibited the following flame spread characteristics when tested in accordance with ASTM E84-12a, *Standard Test Method for Surface Burning Characteristics of Materials*.

Laminam 3+ Porcelain Tile with Fibreglass Backing	Flame Spread Classification	Smoked Developed Classification
Run 1	0	15
Run 2	0	15

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.

INTERTEK TESTING SERVICES NA LTD.

Tested and
Reported by: _____
Greg Philp
Technician – Building Products

Reviewed by: _____
Kal Kooner, P.Eng.
Manager – Building Products

APPENDIX A

DATA SHEETS

ASTM E84-12a DATA SHEETS
Run 1

ASTM E84

Client: Laminam SPA
Date: 10 09 2012
Project Number: 1009000374
Test Number: 1
Operator: Greg Philp

Specimen ID: Porcelain Tiles

TEST RESULTS

FLAMESPREAD INDEX: 0

SMOKE DEVELOPED INDEX: 15

SPECIMEN DATA . . .

Time to Ignition (sec): 250
Time to Max FS (sec): 268
Maximum FS (feet): 0.8
Time to 980 F (sec): Never Reached
Time to End of Tunnel (sec): Never Reached
Max Temperature (F): 507
Time to Max Temperature (sec): 598
Total Fuel Burned (cubic feet): 36.00

FS*Time Area (ft*min): 4.2
Smoke Area (%A*min): 12.2
Unrounded FSI: 2.2
Unrounded SDI: 14.3

CALIBRATION DATA . . .

Time to Ignition of Last Red Oak (Sec): 44.0
Red Oak Smoke Area (%A*min): 85.5

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ASTM E84-12a DATA SHEETS
Run 1

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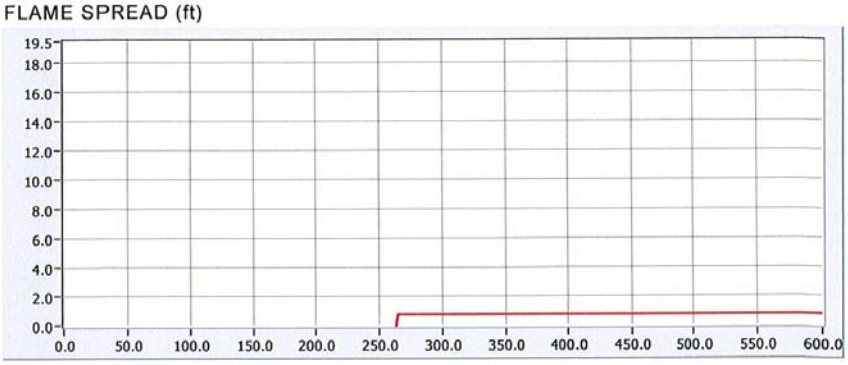
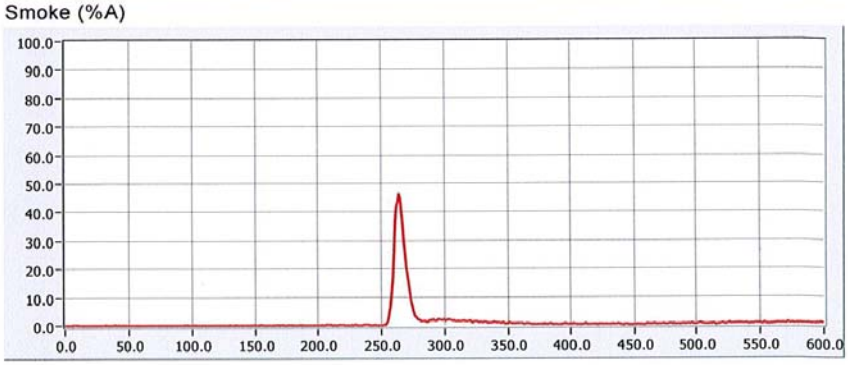
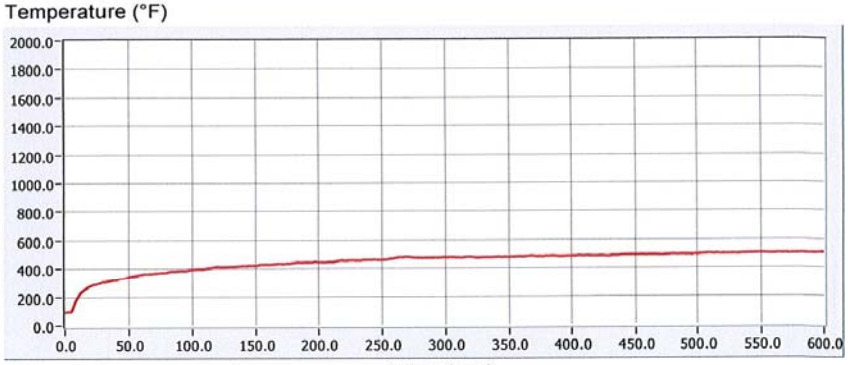
FLAME SPREAD (ft)



Smoke (%A)



Temperature (°F)



Time (sec)

600

ASTM E84-12a DATA SHEETS
Run 2

ASTM E84

Client: Laminam SPA
Date: 10 09 2012
Project Number: 1009000374
Test Number: 2
Operator: Greg Philp

Specimen ID: Porcelain tiles

TEST RESULTS

FLAMESPREAD INDEX: 0

SMOKE DEVELOPED INDEX: 15

SPECIMEN DATA . . .

Time to Ignition (sec): 223
Time to Max FS (sec): 0
Maximum FS (feet): 0.0
Time to 980 F (sec): Never Reached
Time to End of Tunnel (sec): Never Reached
Max Temperature (F): 487
Time to Max Temperature (sec): 580
Total Fuel Burned (cubic feet): 36.60

FS*Time Area (ft*min): 0.0
Smoke Area (%A*min): 12.1
Unrounded FSI: 0.0
Unrounded SDI: 14.2

CALIBRATION DATA . . .

Time to Ignition of Last Red Oak (Sec): 44.0
Red Oak Smoke Area (%A*min): 85.5

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ASTM E84-12a DATA SHEETS
Run 2

Project No: 1009000374

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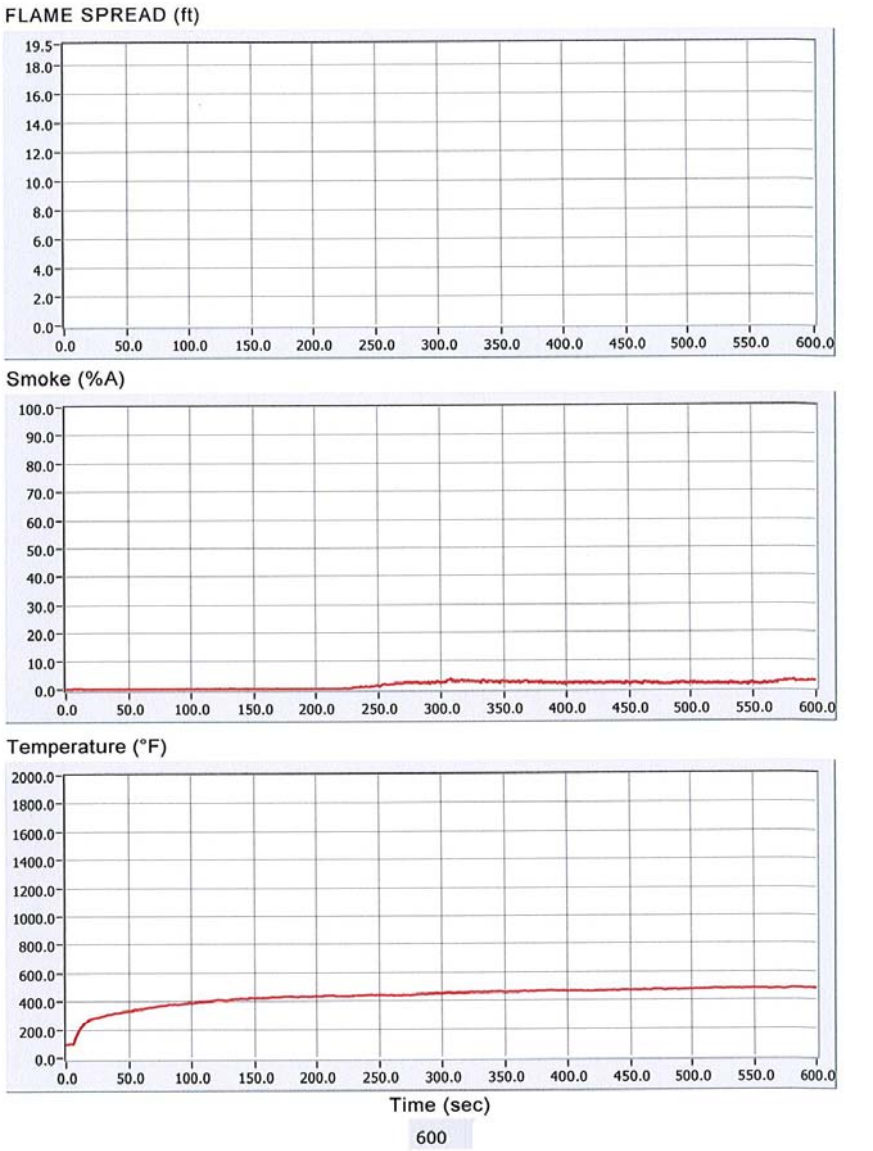

REVISION SUMMARY

DATE	PAGE(S)	SUMMARY
October 10, 2012	All	Original Issue Date