

# CENTRE FOR TEXTILE SCIENCE AND ENGINEERING

DEPARTMENT OF MATERIALS, TEXTILES AND CHEMICAL ENGINEERING

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e-mail date Contact Didier Van Daele FloorAndFire@ugent.be 13/09/2019

## **TEST REPORT 19-0807-02**

Supplement to test report 19-0807-01 from 20/08/2019

#### Samples received :

| Name                      | Date of receipt |
|---------------------------|-----------------|
| Green Plank Smart Decking | 31/07/2019      |

#### Aim of the test:

Determination of the fire behaviour

#### Test conditions:

#### Small flame test

Standard: ISO 11925-2 (2010 + AC 2011)\*

Method: The use surface of a vertically put specimen placed (loose laid) on aluminium beams

(according to EN 13238) is ignited by a propane gas flame. Under condition of a surface flame attack with 15 s exposure time, there shall be no flame spread in excess of 150 mm vertically from the point of the test flame within 20 s from the time

If the boundary line is not reached within 20 s, the sample meets the requirements

for the class E<sub>fl</sub>.

3 lengthwise and 3 crosswise Number of tests:  $23 \pm 2$  °C and  $50 \pm 5$  % R.H. Conditioning

samples:



#### Fire Behaviour

Standard: EN ISO 9239-1 (2010)\*

Method: Before the test the samples are **not cleaned**.

A floorcovering is put on **(loose laid)** aluminium beams (according to EN 13238). During the test, the specimen is irradiated by a gas radiator at an angle of 30°. A small flame is used to ignite the specimen. The specimen is ignited during 10 minutes. In case of inflammable specimens, the test lasts until the flame is extinguished, but 30 minutes at the most. The criterion is the burned length, from

which the critical radiant flux is deduced using a calibration curve.

Number of tests: 4

Conditioning

 $23 \pm 2$  °C and  $50 \pm 5$  % R.H.

samples:

The tests were finished in week 31/2019.

## **OBTAINED RESULTS**

## **Green Plank Smart Decking**

#### Small flame test

Ignition time: 15 s

Lengthwise

| Sample | Burning time (s) | After glowing time (s) | Boundary line reached within 20 s |
|--------|------------------|------------------------|-----------------------------------|
| 1      | -                | -                      | no                                |
| 2      | -                | -                      | no                                |
| 3      | -                | -                      | no                                |

#### Crosswise

| 0.00011.00 |                  |                        |                                   |
|------------|------------------|------------------------|-----------------------------------|
| Sample     | Burning time (s) | After glowing time (s) | Boundary line reached within 20 s |
| 1          | -                | -                      | no                                |
| 2          | -                | -                      | no                                |
| 3          | -                | _                      | no                                |

## Fire behaviour

| Specimen number                               | 1<br>Length | 2<br>Width | 3<br>Width | 4<br>Width | Average<br>Specimens<br>2,3,4 |
|---|-------------|------------|------------|------------|-------------------------------|
| Flame spread after 10 min (mm)                | 10          | 50         | 50         | 30         |                               |
| Flame spread after 20 min (mm)                | 20          | 50         | 50         | 30         |                               |
| Flame spread after 30 min (mm)                | 20          | 50         | 50         | 30         |                               |
| Flame spread at extinction (mm)               | 20          | 50         | 50         | 30         |                               |
| Flame time                                    | 13min 57s   | 13min 15s  | 13min 21s  | 12min 48s  |                               |
| Critical heat flux CHF at extinction (kW/m²)  | 11.1        | 11.0       | 11.0       | 11.1       | ≥11                           |
| Total smoke production at end of test (%.min) | 39          | 45         | 11         | 14         | 23                            |

i.o. Stijn Rambour Didier Van Daele

Head of Floor covering and Fire Tests

Prof. Dr. Paul KIEKENS, dr. h. c.

Director

# **ENCLOSURE TO REPORT 19-0807-02**

## Classification according to EN 13501-1

## Warning: this statement cannot be used for CE labelling purposes

| Classification | EN ISO 11925-2<br>(ignition time = 15 s) | EN ISO 9239-1<br>(test period = 30 min) | CLASS |
|----------------|--|---|-------|
| B fl           | Fs ≤ 150 mm in 20 s                      | Critical flux ≥ 8.0 kW/m²               | X     |
| C fl           | Fs ≤ 150 mm in 20 s                      | Critical flux ≥ 4.5 kW/m²               |       |
| D fl           | Fs ≤ 150 mm in 20 s                      | Critical flux ≥ 3.0 kW/m²               |       |
| E fl           | Fs ≤ 150 mm in 20 s                      | No demand                               |       |
| F fl           | No demand                                | No demand                               |       |

## Additional classification smoke development

|                              |    | CLASS |
|------------------------------|----|-------|
| Smoke development ≤ 750%.min | s1 | X     |
| Smoke development > 750%.min | s2 |       |