

# CENTRE FOR TEXTILE SCIENCE AND ENGINEERING

DEPARTMENT OF MATERIALS, TEXTILES AND CHEMICAL ENGINEERING

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Contact e-mail date Didier Van Daele FloorAndFire@ugent.be 01/06/2021

# **TEST REPORT 21-0380-02**

Translation of test report 21-0380-01 from 01/06/2021

#### Samples received

| Name  | Date of receipt |
|---|-----------------|
| Flat protective coating with synthetic fibre wear layer + protective film | 03/05/2021      |
| Commercial reference: Cover 'N Go Colour: white                           |                 |
| Production date: 30/03/21   |                 |
| Mother bobbin: 210011722 Daughter bobbin: 210012079                       |                 |
| OF finition 2100899   |                 |

#### 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 a fibre cement

board (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

application.

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

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

Number of tests: Conditioning

3 lengthwise and 3 crosswise  $23 \pm 2$  °C and  $50 \pm 5$  % R.H.

samples:



21-0380-02

#### Fire Behaviour

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

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

A floorcovering is put on **(loose laid)** a fibre cement board (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 21/2021.

## **OBTAINED RESULTS**

#### Small flame test

Ignition time: 15 s

Lengthwise

| Longinwioc |        |                  |                        |                                   |
|------------|--------|------------------|------------------------|-----------------------------------|
|            | Sample | Burning time (s) | After glowing time (s) | Boundary line reached within 20 s |
|            | 1      | 33               | -                      | no                                |
|            | 2      | 28               | -                      | no                                |
|            | 3      | 23               | -                      | no                                |

#### Crosswise

| Sample | Burning time (s) | After glowing time (s) | Boundary line reached within 20 s |
|--------|------------------|------------------------|-----------------------------------|
| 1      | 35               | -                      | no                                |
| 2      | >60              | -                      | no                                |
| 3      | >60              | -                      | no                                |

## Fire behaviour

| Specimen                                      | Length    | Width     | Width     | Width     | Average of specimens In Width |
|---|-----------|-----------|-----------|-----------|-------------------------------|
| Flame spread after 10 min (mm)                | 20        | 130       | 30        | 30        |                               |
| Flame spread after 20 min (mm)                | 20        | 130       | 30        | 30        |                               |
| Flame spread after 30 min (mm)                | 20        | 130       | 30        | 30        |                               |
| Flame spread at extinction (mm)               | 20        | 130       | 30        | 30        |                               |
| Flame time                                    | 12min 00s | 12min 00s | 12min 00s | 12min 00s |                               |
| Critical heat flux CHF at extinction (kW/m²)  | >11       | 10.2      | >11       | >11       | 10.8                          |
| Total smoke production at end of test (%.min) | 0         | 3         | 1         | 2         | 2                             |

Note: heat flux values are rounded to the nearest 0.2 (kW/m²) as prescribed in ISO 9239-1

Didier Van Daele Head of Floor covering and Fire Tests

# **ENCLOSURE TO REPORT 21-0380-02**

## Classification according to EN 13501 -1

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

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

## Additional classification smoke development according to EN 13501-1

|                              |    | CLASS |
|------------------------------|----|-------|
| Smoke development < 750%.min | s1 | x     |
| Smoke development > 750%.min | s2 |       |