

# 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 02/04/2020

# **TEST REPORT 20-0269-02**

Translation of test report 20-0269-01 from 2/04/2020

## Samples received

Name	Date of receipt
Velvet needlepunched tile with a 100% polypropylene wear layer with an	12/03/2020
active foamed back-coating and a fire retardant sub layer based on polyolefins	
Commercial reference: Expoquadra Colour: beige	
Production date : 6/03/2020 OF daltex : 2004139	
N° mother bobbin: 200004146	

## 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>.

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

samples:



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#### 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 13/2020.

## **OBTAINED RESULTS**

## Small flame test

Ignition time: 15 s

Lengthwise

Longinuo					
	Sample	Burning time (s)	After glowing time (s)	Boundary line reached within 20 s	
	1	15	-	no	
	2	15	-	no	
	3	16	-	no	

#### Crosswise

Ol Coolings					
	Sample	Burning time (s)	After glowing time (s)	Boundary line reached within 20 s	
	1	15	-	no	
	2	15	-	no	
	3	15	-	no	

## Fire behaviour

Specimen number	1 Length	2 Width	3 Width	4 Width	Average Specimens 2,3,4
Flame spread after 10 min (mm)	235	240	240	240	
Flame spread after 20 min (mm)	235	240	240	245	
Flame spread after 30 min (mm)	235	240	240	245	
Flame spread at extinction (mm)	235	240	240	245	
Flame time	25min 45s	14min 33s	14min 24s	14min 0s	
Critical heat flux CHF at extinction (kW/m²)	8.5	8.4	8.4	8.3	8.4
Total smoke production at end of test (%.min)	130	132	117	180	143

LIEDTS Eddy Technician

Didier Van Daele Head of Floor covering and Fire Tests Prof. Dr. Paul KIEKENS, dr. h. c. Director

# **ENCLOSURE TO REPORT 20-0269-02**

## Classification according to EN 13501-1

Warning: this statement cannot be used for CE labelling purposes

Classification	EN ISO 11925-2 (ignition time = 15 s)	EN ISO 9239-1 (test period = 30 min)	CLASS
B <sub>fl</sub>	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	
Ffl	No demand	No demand	

## Additional classification smoke development

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