

# **CENTRE FOR TEXTILE SCIENCE AND ENGINEERING**

DEPARTMENT OF MATERIALS, TEXTILES AND CHEMICAL ENGINEERING

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## TEST REPORT 19-0226-02 Translation of test report 19-0226-01 from 13/03/2019

#### Samples received :

Name		Date of receipt
Flat needlepunched tile with 1 fire-retardant impregnation	04/03/2019	
polyolefins		
Commercial reference : CONC		
Colour : night blue		
Production date: 21/02/2019		
Mother bobbin: 190041357	Daughter bobbin Artos 3: 190043786	
OF daltex 1903488		

#### 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 $E_{\rm fl}$ .
Number of tests:	3 lengthwise and 3 crosswise
Conditioning samples:	23 ± 2 °C and 50 ± 5 % R.H.

The test results only apply to materials that correspond to the tested sample. Forgery will be legally prosecuted, just like partial reproduction without prior written permission . Tests that are marked \*are accredited. Advices and interpretations are not covered by the accreditation.



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Fire Behaviour	
Standard:	EN ISO 9239-1 (2010)*
Method:	Before the test the samples are <b>not cleaned</b> .
	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 ± 2 °C and 50 ± 5 % R.H.
samples:	

The tests were finished in week 11/2019.

## **OBTAINED RESULTS**

#### Small flame test

Ignition time : 15 s

#### Lenathwise

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

#### Crosswise

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	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 Length	2 Width	3 Length	4 Length	Average Specimens 1,3,4
Flame spread after 10 min (mm)	255	250	250	250	
Flame spread after 20 min (mm)	255	250	250	250	
Flame spread after 30 min (mm)	255	250	250	250	
Flame spread at extinction (mm)	255	250	250	250	
Flame time	14min 3s	14min 15s	15min 15s	14min 12s	
Critical heat flux CHF at extinction (kW/m <sup>2</sup> )	8.1	8.2	8.2	8.2	8.2
Total smoke production at end of test (%.min)	282	231	306	276	287

Prof. Dr. Paul KIEKENS, dr. h. c. **Didier Van Daele** 

Head of Floor covering and Fire Tests

Director

## ENCLOSURE TO REPORT 19-0226-02

## Classification according to EN 13501 –1 (2007 + A1: 2009)\*

Classification	EN ISO 11925-2 (ignition time = 15 s)	EN ISO 9239-1 (test period = 30 min)	CLASS
B fl	$Fs \le 150 \text{ mm}$ in 20 s	Critical flux $\ge 8.0 \text{ kW/m}^2$	х
C fl	$Fs \le 150 \text{ mm}$ in 20 s	Critical flux $\ge$ 4.5 kW/m <sup>2</sup>	
D fl	$Fs \le 150 \text{ mm}$ in 20 s	Critical flux $\ge$ 3.0 kW/m <sup>2</sup>	
E fl	$Fs \le 150 \text{ mm}$ in 20 s	No demand	
F fl	No demand	No demand	

## Additional classification smoke development according to EN 13501-1 (2007 + A1:2009)\*

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