



Neuville, December 04<sup>th</sup> 2015

Our ref. : MW/DV  
Study RL 2015/602

modulyss<sup>®</sup>  
Zevensterrestraat 21  
B 9240 ZELE  
BELGIUM

**To the attention of Mrs Veert DEHAEMERS**

Madam,

Please kindly find in the attached reports the results of orientating tests of reaction to fire radiant panel in accordance with NF EN ISO 9239-1 made on your quality "LEAF"

Compared to the classification criteria of the EN 13501-1 September 2007 + A1 (2013) are:

Critical heat flux :  $\geq 3,0 \text{ kW/m}^2$  : class D<sub>fl</sub>

Critical heat flux :  $\geq 4,5 \text{ kW/m}^2$  : class C<sub>fl</sub>

Critical heat flux :  $\geq 8,0 \text{ kW/m}^2$  : class B<sub>fl</sub>

Smoke density: s1 smoke  $\leq 750 \% \text{ X min}$

: s2 products that do not meet the criteria for class 1

Probable classification loose laid over fibre cement board: **B<sub>fl</sub>-s1**.

Regards,

For the SARL C.R.E.T  
The Technical Director,  
Marc WELCOMME

## TEST REPORT N° RL 2015/602

DELIVERY : 04/12/2015

MATERIAL RECEIVED : 20/11/2015

ORIGIN : modulyss N.V  
Zevensterrestraat 21  
B 9240 ZELE  
BELGIUM

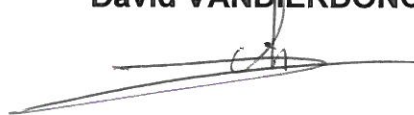
NAME OF QUALITY : **LEAF**

TESTS TYPE : Orientation test : Reaction to fire tests for floorings according to NF EN ISO 9239-1 (February 2013)  
Part 1: Determination of the burning behaviour using a radiant heat source

The Technical Director  
**Marc WELCOMME**



Head of Tests  
**David VANDIERDONCK**



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It contains **3** page(s) and **0** annex(s).

The results which have been obtained by means of the sample specified above, may not be generalised without justification of the representativeness of the samples.

**ORIGIN OF THE SAMPLE TO CONSIDER:**

Sample provided by the applicant of the test

**PRODUCT DESCRIPTION DETERMINED BY THE LABORATORY:**

Tufted structured loop pile carpet tile of 50 x 50 cm (EN 1307 family product).

**INFORMATION GIVEN BY THE CUSTOMER :**

Composition of use-surface : 100% polyamide

Type of primary backing : no woven polyester

Type of backing : bitumen

Total mass per unit area : 4517 g/m<sup>2</sup>

Total thickness : 7,8 mm

Total pile thickness: 4,3 mm

Colouring : Black – white

Flame retardant : no declared

**Description of test specimens :**

\*Substrate : fibres-ciment

Density (1800 ± 200) kg /m<sup>3</sup>

Dimensions 105 cm x 23 cm

Thickness (8 ± 2) mm

Installation : loose laid

Cleaning : none

**Conditioning :**

13 days at (23 ± 2)°C and (50 ± 5) % relative humidity

**Eventual deviations from the test method :**

Orientation test

**Date of test :**

04/12/2015

**Duration of the test :**

The radiation is maintained for 30 minutes.

**RESULTS :****1) HEAT FLUX**

Specimen	Flame front distance (mm)			Heat flux (kW/m <sup>2</sup> )			Duration of flaming (min/s)	Maximum flame front distance (mm)	Critical Heat flux CHF (kW/m <sup>2</sup> )
	10 min	20 min	30 min	HF 10	HF 20	HF 30			
1 (L)*	240	250	250	8,6	-	-	19 min 20 s	250	8,4
1 (T)*	180	250	250	9,7	8,4	-	23 min 30 s	250	8,4

(L)\* → Longitudinally direction

(T)\* → Transversally direction

**Observations :**

Specimen is mounted in such a way at least one joint is situated 250 mm from the zero point.

Distance burnt (mm)	Time for each specimen to burn in minutes (min) and seconds (s)	
	1 (Longitudinally)	1 (Transversally)
50	3 min 00 s	3 min 30 s
100	4 min 20 s	5 min 40 s
150	6 min 40 s	8 min 00 s
200	8 min 30 s	10 min 30 s
250	10 min 40 s	13 min 30 s
300		
350		
400		
450		
500		

**2) SMOKE DENSITY**

Specimen	Maximum light attenuation (%)	Smoke development (% X min)
1 (L)*	42,9	233,3
1 (T)*	29,4	194,4

(L)\* → Longitudinally direction

(T)\* → Transversally direction

The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

\*\*\*End of report\*\*\*