

SOMMER NEEDLEPUNCH  
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## **TEST REPORT 20-0278-02**

**Supplement to test report 20-0278-01 from 02/04/2020**

### **Samples received**

<b>Name</b>	<b>Date of receipt</b>
<b>Ferrat</b> No infill	16/03/2020

### **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: 3 lengthwise and 3 crosswise

Conditioning 23 ± 2 °C and 50 ± 5 % R.H.

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**) 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 14/2020.

## OBTAINED RESULTS

### Small flame test

Ignition time : 15 s

#### Lengthwise

Sample	Burning time (s)	After glowing time (s)	Boundary line reached within 20 s
1	15	-	no
2	16	-	no
3	19	-	no

#### Crosswise

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 Length	4 Length	Average Specimens 1,3,4
Flame spread after 10 min (mm)	230	240	265	260	
Flame spread after 20 min (mm)	285	295	305	295	
Flame spread after 30 min (mm)	310	330	335	325	
Flame spread at extinction (mm)	310	330	335	325	
Flame time	25min 0s	24min 0s	26min 6s	25min 0s	
Critical heat flux CHF at extinction (kW/m <sup>2</sup> )	7.3	6.7	6.6	6.8	6.9
Total smoke production at end of test (%.min)	638	667	667	670	658

*c.o.*  
  
**LIEDTS Eddy**  
Technician

Didier Van Daele  
Head of Floor covering and Fire Tests

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

# ENCLOSURE TO REPORT 20-0278-02

## *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>	F <sub>s</sub> ≤ 150 mm in 20 s	Critical flux ≥ 8.0 kW/m <sup>2</sup>	
C <sub>fl</sub>	F <sub>s</sub> ≤ 150 mm in 20 s	Critical flux ≥ 4.5 kW/m <sup>2</sup>	<b>X</b>
D <sub>fl</sub>	F <sub>s</sub> ≤ 150 mm in 20 s	Critical flux ≥ 3.0 kW/m <sup>2</sup>	
E <sub>fl</sub>	F <sub>s</sub> ≤ 150 mm in 20 s	No demand	
F <sub>fl</sub>	No demand	No demand	

## *Additional classification smoke development*

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