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**date**  
27/01/2017

## **TEST REPORT 17-0022-01**

### **Samples received :**

<b>Name</b>	<b>Date of receipt</b>
Rigid LVT flooring - 3.5 mm	06/01/2017

### **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 on a fibre cement board (loose laid) 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

Measurement uncertainty: The relative reproducibility for 3 repetitions is 27.2% for the burning time.

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

## Fire Behaviour

Standard:	<b>EN ISO 9239-1 (2010)*</b>
Method:	Before the test the samples are <b>not cleaned</b> . A floorcovering is put on <b>(loose laid)</b> to a fibre cement board. 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
Measurement uncertainty:	The relative reproducibility for 3 repetitions is 13% for the flux, 59% for the smoke development.
Conditioning samples:	23 ± 2 °C and 50 ± 5 % R.H.

The tests were finished in week 4/2017

## **OBTAINED RESULTS**

### **Small flame test**

Ignition time : 15 s

#### **Lengthwise**

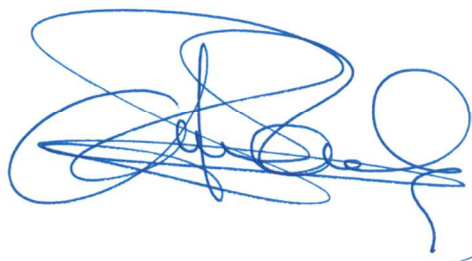
Sample	Burning time (s)	After glowing time (s)	Boundary line reached within 20 s
1	15	-	no
2	15	-	no
3	15	-	no

#### **Crosswise**

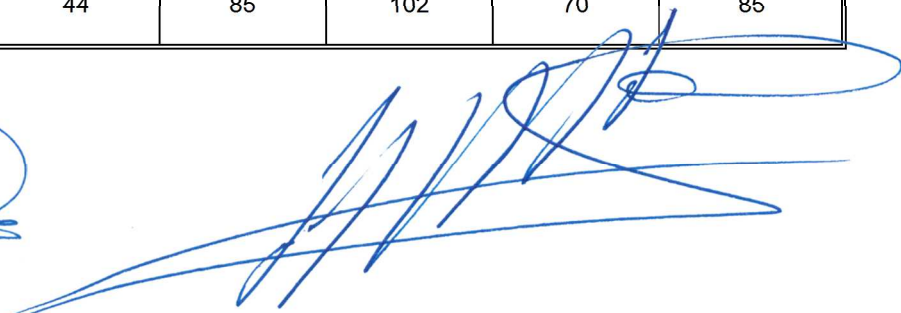
Sample	Burning time (s)	After glowing time (s)	Boundary line reached within 20 s
1	15	-	no
2	15	-	no
3	15	-	no

### **Fire behaviour**

Specimen number	1 Length	2 Width	3 Width	4 Width	Average Specimens 2,3,4
Flame spread after 10 min (mm)	60	100	90	90	
Flame spread after 20 min (mm)	60	100	90	90	
Flame spread after 30 min (mm)	60	100	90	90	
Flame spread at extinction (mm)	60	100	90	90	
Flame time	12min 0s	12min 24s	12min 12s	12min 24s	
Critical heat flux CHF at extinction (kW/m <sup>2</sup> )	11.0	10.7	10.8	10.8	≥11
Total smoke production at end of test (%.min)	44	85	102	70	85



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Prof. Dr. Paul KIEKENS, dr. h. c.  
Head of Department

## ENCLOSURE TO REPORT 17-0022-01

*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 <sub>fl</sub>	F <sub>s</sub> ≤ 150 mm in 20 s	Critical flux ≥ 8.0 kW/m <sup>2</sup>	<b>X</b>
C <sub>fl</sub>	F <sub>s</sub> ≤ 150 mm in 20 s	Critical flux ≥ 4.5 kW/m <sup>2</sup>	
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 according to EN 13501-1 (2007 + A1:2009)\**

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