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## Efectis Nederland report

### 2010-Efectis-R1102

# Reaction to fire testing of Fiberplast flooring panels; Series Classic: Types; Coffee Brown and Natural Brown Radiant Panel Flooring test according to EN ISO 9239-1:2002

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**Product identification:**

Fiberplast flooring panels; Series Classic: Types; Coffee Brown and Natural Brown, further referred to as 'the product'.

**Abstract:**

Determination of the reaction to fire properties of the product, when exposed to a thermal attack by a **Radiant Panel** according to EN ISO 9239-1:2002, with the objective to obtain the reaction to fire classification according to EN 13501-1.

**Intended application:**

The product will be used as a floor covering.

**Manufacturer/importer:**

Fiberplast BV  
De Roef 7a  
NL - 9206 AK DRACHTEN  
The Netherlands

**Product description:**

According to the sponsor the product is composed of:

- 50-53 % recycled wood dust
- 42-45 % recycled HDPE (high density polyurethane)
- 2.5-4% additives: UV stabilizer, AO stabilizer, colour pigments
- Lamella thickness 5 mm. Open void in middle of profile
- Colours: Coffee Brown and Natural Brown

The total product has a thickness of approx. 25 mm

Mass per unit area is approx. 16.9 kg/m<sup>2</sup>

**Sample:**

Sampling procedure: The samples were and submitted by the sponsor. Specimens were prepared by Efectis

Age: According sponsor produced 26<sup>th</sup> May 2009.

Date of receipt: 22<sup>nd</sup> September 2009

**Specimen preparation:**

Substrate used: 6 mm fibre cement board non-combustible (ISO 390 and class A1/A2 according to EN 13238).

Method of fixing: Loose laid with distance holders

**Conditioning:**

Prior to the examinations, the specimens were conditioned over a period of at least 1 week at a temperature of (23 ± 2) °C and a relative humidity of (50 ± 5) % according to § 4.1 of EN 13238:2001.

**Method of examinations:**

Number of tests: A total of five Radiant Panel Flooring tests were carried out, all in accordance with EN ISO 9239-1:2002.

Deviations from the test method: None

Harmonised Product Standard: At the time of examination of the product, the sponsor was not aware of a related existing Harmonised Product Standard.

**Examination:**

Date of examination: 20<sup>th</sup> October, 3<sup>rd</sup> November, 16<sup>th</sup> December 2009

The results are given in Table 1.

Table 1: Horizontal surface spread of flame, heat flux and light attenuation

Sample number	1	2	3	Classification parameter	4	5
Type	Coffee Brown				Natural Brown	
Orientation	Parallel			Cross	Parallel	
<b>Spread of flame</b>						
Distance [mm]	Time [s]					
50	230	260	215		276	210
100	370	435	330		438	285
150	526	540	435		670	350
200	655	635	600		1095	438
250	766	740	702		1458	531
300	916	900	888			639
350	1150	1080	1056			768
400	1420	1380	1260			945
450	1699	1705	1701			1158
500						1446
550						
<b>Maximum spread of flame</b>						
Distance [mm]	460	450	470		280	500
Time [s]	1800	1800	1800		1800	1446
<b>Critical heat flux(CHF)</b>						
CHF [kW/m <sup>2</sup> ]	4	4	4	<b>4</b>	8	3
<b>Heat flux (HF) after x minutes</b>						
Time [min]	HF [kW/m <sup>2</sup> ]					
10	10	10	9	<b>10</b>	11	8
20	6	6	5	<b>6</b>	9	4
30	4	4	4	<b>4</b>	8	3
<b>Light attenuation (LA)</b>						
Max. LA [%]	17	14	17	<b>16</b>	2	18
Total LA [% .min]	84	73	103	<b>87</b>	6	121

Observations of physical behaviour of the test specimen: None of interest

**Conclusions:**

A formal classification is to be assessed in accordance with EN 13501-1, “Fire classification of construction products and building elements – Part 1: Classification using data from reaction to fire tests”.

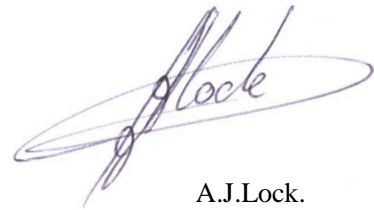
Graphs of Critical Heat Flux (CHF), Attenuation (smoke), Total Light Attenuation (smoke) are presented hereafter followed by a photograph of the samples tested.

**Remarks:**

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.

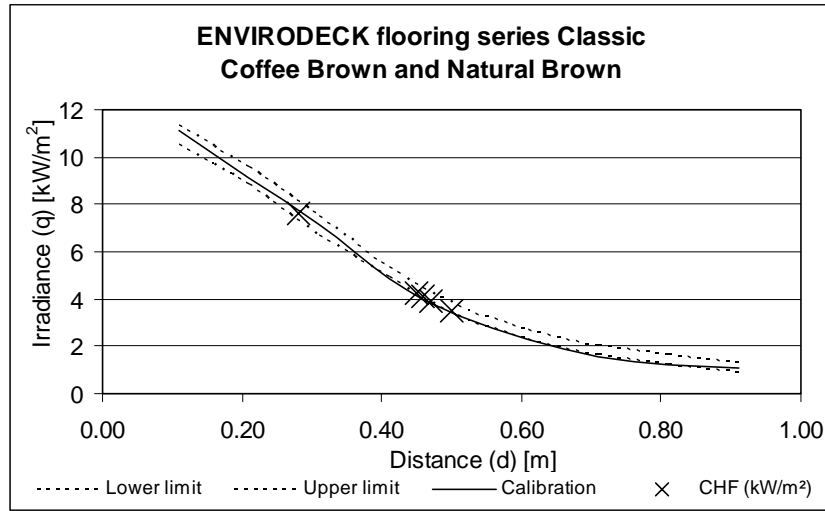


J. F. Ostenfeldt M.Sc.

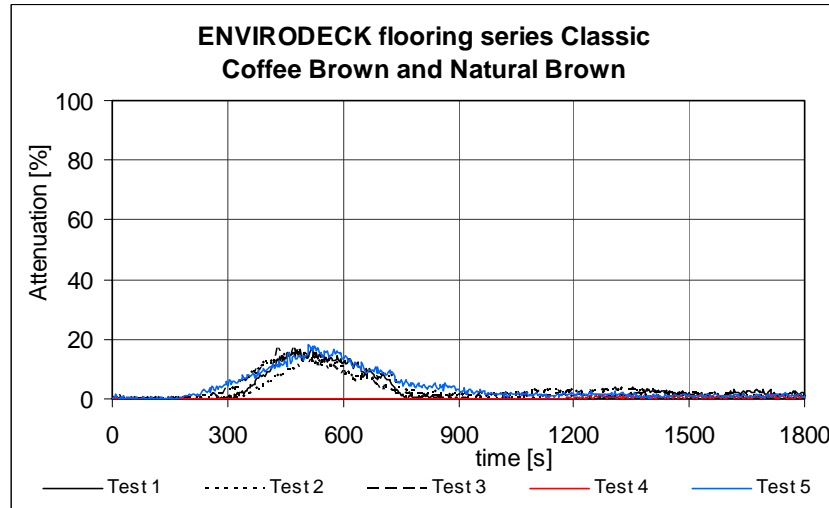


A.J.Lock.

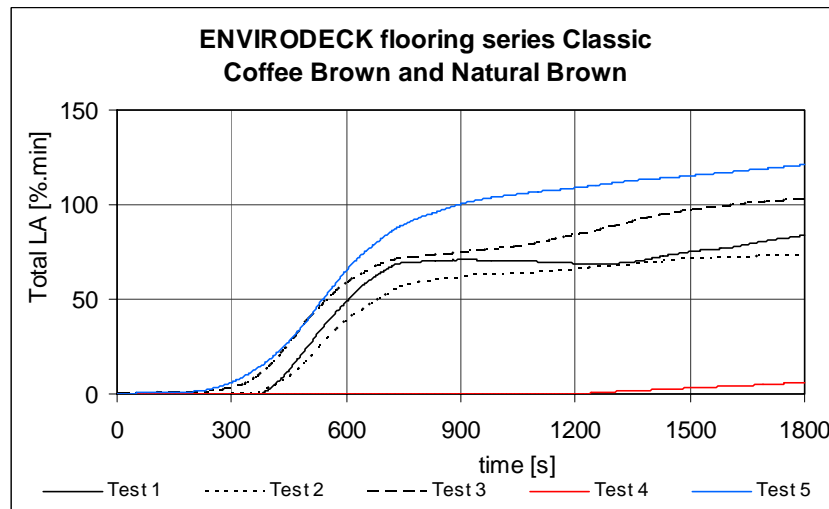
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Critical Heat Flux (CHF), Radiant Panel Flooring Test



Attenuation [%]



Total Light Attenuation [% .min]



Specimens type Coffee Brown after testing



Specimens type Natural Brown after testing

Photographs