

Test Report No. 19147A

Sponsor

Verduren
1098 Chestnut Bend
West Plains, MO 65775

Construction product and trade name

Cast floor Verduren

Nature of the test

EN ISO 11925-2:2010/AC:2011 – Reaction to fire tests – Ignitability of building products subjected to direct impingement of flame – Part 2: Single-flame source test (EN ISO 11925-2:2010/AC:2011) – flame application time: 15 s.

Summary of the results

Flame spread F_s (mm)	≤ 150
Ignition of the filter paper	No

PREPARED BY

APPROVED BY

This report consists of 7 pages

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1. DESCRIPTION OF THE TEST METHOD

EN ISO 11925-2:2010/AC:2011 – Reaction to fire tests – Ignitability of building products subjected to direct impingement of flame – Part 2: Single-flame source test.
The flame application time is 15 s.

There was no deviation from the specifications contained in the test standard.

2. IDENTIFICATION OF THE PRODUCT

Date of test samples arrival : 16/05/2018

Identification of the samples : Prod. Place Rhenen
Prod. Line Verduren
Prod. Date 15/02/2018
Identification within the quality system:
11576104

Sampling done by : The sponsor (Mr. Henk Kesteloo)

Sampling date : 19/03/2018

Name of the sponsor : Verduren
1098 Chestnut Bend
West Plains, MO 65775

Name of the manufacturer/supplier : Verduren
1098 Chestnut Bend
West Plains, MO 65775

Trade name :
Verduren

Description of the tested product:

This description is based on information given by the sponsor.

	Nominal values (*)	Measured values (**)
Total product (see Figure 1)		
Type of product	The tested product is a liquid applied floor covering consisting of a primer (layer 1; DS 315), a natural cast floor (layer 2; Verduren) and a polyurethane top coat (layer 3; PU Protector).	
Manufacturer	Verduren	
Total thickness (mm)	2,3	2,85
Total surface weight (g/m ²) (dry)	19058 (including the fibre cement substrate) (**)	
Layer 1: Primer		
Type of product	Two component solvent free primer on the basis of synthetic resins	
Trade name	DS 315	
Manufacturer	Verduren	
Mixture ratio A-component (kg)/ B-component (kg)	2/1	
Solid content (% w/w)	100	
Density of the mixture (kg/m ³) (wet)	1100	
Fire retardants	No	
Colour of the mixture	Colourless, transparent	
Fixation onto the substrate		
<i>Fixing method</i>	Roller	
<i>Number of layers</i>	1	(***)
<i>Applied amount (g/m²) (wet)</i>	300	(***)
<i>Dried film thickness (mm)</i>	0,2	(***)

(*) Based on the information given by the sponsor.

(**) Values verified by the laboratory.

(***) Unverifiable by the laboratory.

	Nominal values (*)	Measured values (**)
Layer 2: Natural cast floor		
Type of product	Natural cast floor on the basis of resins, linseed oil, wood flour, cork, natural fillers and pigments	
Trade name	Verduren	
Manufacturer	Verduren	
Mixture ratio A-component (kg) / B-component (kg)	5,15 / 1	
Solid content (% w/w)	100	
Density of the mixture (kg/m ³) (wet)	1520	
Fire retardants	No	
Colour of the mixture	Beige / salmon pink	
Fixation onto the primer (layer 1)		
<i>Fixing method</i>	Trowel	
<i>Number of layers</i>	1	(***)
<i>Applied amount (g/m²) (wet)</i>	3000	(***)
<i>Dried film thickness (mm)</i>	2	2,85
Layer 3: Polyurethane top coat		
Type of product	Two component PU coating on the basis of polyurethane	
Trade name	TopCoat	
Manufacturer	Verduren	
Mixture ration coating (l) / hardener (l)	10/1	
Solid content (% w/w)	100	
Density of the mixture (kg/m ³) (wet)	1001	
Fire retardants	No	
Colour of the mixture	Transparent	
Fixation onto the cast floor (layer 2)		
<i>Fixing method</i>	Roller	
<i>Number of layers</i>	1	(***)
<i>Applied amount (g/m²) (wet)</i>	80	(***)
<i>Dried film thickness (mm)</i>	0,1	(***)

(*) Based on the information given by the sponsor.

(**) Values verified by the laboratory.

(***) Unverifiable by the laboratory.



Figure 1: Tested cast floor

Mounting and Fixing:

The cast floor was applied by the sponsor onto a fibre cement board (substrate) with a thickness of 8 mm and a density of 1908 kg/m³, fully in accordance with EN 13238:2010.

The whole assembly (substrate + cast floor) was tested free hanging. Since there's no difference in production direction of the product (lengthwise vs. crosswise), direction is not considered a parameter.

Conditioning, according to EN 13238, § 4.2 to constant mass.

Start of conditioning : 16/05/2018

End of conditioning : 29/05/2018

3. RESULTS AND OBSERVATIONS

Date of test : 29/05/2018

a) Test results

a.1) Surface exposure

Position of flame application:

- Centre line of the specimen, 40 mm above the bottom edge
(see figure 9 of the standard)

Test results

Specimen No.	1	2	3	4	5	6
Ignition (yes/no)	no	no	no	no	no	no
Flame tip reaching the measuring mark, 150 mm above the flame application point within 20 s, after flame application (yes/no)	no	no	no	no	no	no
Moment of appearance (s)	-	-	-	-	-	-
Maximal flame spread (mm)	-	-	-	-	-	-
Ignition of the filter paper (yes/no)	no	no	no	no	no	no

Observations

Carbonisation at flame height, discoloration and flashes < 3 s

a.2) Edge exposure

According to EN 13501-1:2007+A1:2009, only surface exposure has to be performed for flooring applications. Therefore no edge exposure has been performed.

b) Summary of test results

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

The test results are only valid for the specimens of the product as they have been tested.

The following test results were obtained in accordance with the standard EN ISO 11925-2:2010/AC:2011:

Flame spread F_s (mm)	≤ 150
Ignition of the filter paper	No

c) Uncertainty of measurement

Regarding the precision of the test method, at the present time we have insufficient information to make a considerate statement regarding the uncertainty of measurement. The uncertainty of test results for this test report is described in Annex A of the test standard.

As this annex only covers generic products and as we know at this moment that the uncertainty can be influenced by the nature of the product in the test, the values in Annex A can only give an indication of the actual uncertainty of the tests described in this report.