



TEST REPORT

No. 20/P044

Job No.: 41500028

No. of pages: 4 + appendixes

No. of copies: 2

Copy No.: 1

Name of test: Determination of flammability class of construction products

Material/product/construction: Elastic mesh fabric made of PPV fiber with flame retardant

Sponsor: LANEX a.s.
Hlučínská 96/1
747 23 Bolatice
Czech Republic

Manufacturer: LANEX a.s.
Hlučínská 96/1
747 23 Bolatice
Czech Republic

Test specimens delivery date: 28th November 2019

Workplace: Fire technical laboratory

Location: Pražská 16, Praha 10 – Hostivař

Date of test: 12th February 2020

Date of issue: 13th February 2020



Vít Slaboch
technical manager and
head of laboratory

1. Test assignment

The test has been done on the base of order No. 4500095382 issued on 28th November 2019.

2. Test methods

- DIN 4102-1:1998 Fire behaviour of building materials and building components - Part 1: Building materials; concepts, requirements and tests.
- DIN 4102-16:1998 Fire behaviour of building materials and building components - Part 16: "Brandschacht" tests.
- DIN 4102-15:1990 Fire behaviour of building materials and elements "Brandschacht".

3. Test specimens

The test specimens were delivered by manufacturer. Marking of the test specimens in laboratory: 20/P044/1-3.

Composition: PPV fiber with flame retardant

Appearance: Black elastic mesh. Thickness 2 to 4 mm, mass per unit area 200 to 450 g/m². Face side and back side are identical.

Fixing method: Fixed on the metal holder according to DIN 4102-15, table 1, detail 1.

4. Test equipment

- 1) Test device according to DIN 4102 teil 15 „Brandschacht“ (Reg. No. 744)
- 2) Yardstick (Reg. No. 148)
- 3) Digital stop watch (Reg. No. 4)
- 4) Flow meter (Reg. No. 300)
- 5) Flow meter (Reg. No. 301)
- 6) Thermometer / relative humidity meter (Reg. No. 74)
- 7) Digital anemometer (Reg. No. 67)
- 8) AD converter (Reg. No. 45)
- 9) Weighing scale OWA Labor (Reg. No. 6)
- 10) Non-coated thermocouple 0,5 mm (Reg. No. 119)
- 11) Non-coated thermocouple 0,5 mm (Reg. No. 120)
- 12) Non-coated thermocouple 0,5 mm (Reg. No. 121)
- 13) Non-coated thermocouple 1,5 mm (Reg. No. 122)
- 14) Non-coated thermocouple 1,5 mm (Reg. No. 123)
- 15) Non-coated thermocouple 1,5 mm (Reg. No. 134)
- 16) Non-coated thermocouple 1,5 mm (Reg. No. 135)

5. Test results and conclusion

Conditioning: 14 days at temperature $T = (23 \pm 2) ^\circ\text{C}$
Testing conditions in laboratory: $T = 23 ^\circ\text{C}$

relative humidity $\text{RH} = (50 \pm 3) \%$
relative humidity $\text{RH} = 26 \%$

Measuring and observations	Test specimen No.											
	1				2				3			
Residual length of every test specimen [cm]	29	26	28	32	27	26	26	29	31	26	28	28
Residual length average value of the test specimen [cm]	28,8				27,0				28,3			
The highest smoke temperature [°C]	104,4				116,1				111,0			
Time to accomplish of the highest temperature of the smoke [min:s]	1:17				1:04				1:39			
The highest flame level above the bottom edge of the test specimen [cm]	30				30				30			
Time to accomplish the highest flame level [min:s]	0:20				0:30				0:20			
Smoke production [%.min]	17,2				14,5				16,5			
Maximum light attenuation [%]	11,3				8,7				9,1			
Time to accomplish the maximum smoke density [min:s]	0:27				0:32				0:41			
Time of sustained burning after end of test [s]	0				0				0			
Time of gloving after end of test [s]	0				0				0			
Flaming droplets / particles [yes/no]	yes				yes				yes			
Burning time of fallen particles [s]	120				120				120			

Testing according to DIN 4102-1:1998, clause 6.2.5 (Baustoffklasse B2):

The product *Elastic mesh fabric made of PPV fiber with flame retardant* does comply with requirements given in DIN 4102 – 1:1998 for B2 classification. Measured values and test results are showed in the Test report No. 20/P043 issued on 13th February 2020 by ITC a.s., accredited testing laboratory No. 1007.4.

Conclusion:

The tested sample of *Elastic mesh fabric made of PPV fiber with flame retardant* **does comply** with requirements given in the standard DIN 4102 – 1 for classification:

DIN 4102-B1.



6. Measurement uncertainty

Expanded measurement uncertainty of length is $\pm 4,0$ cm.

Expanded measurement uncertainty of smoke density is $\pm 9,8$ s.

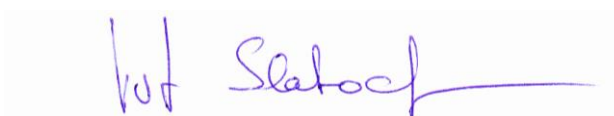
Expanded measurement uncertainty of temperature $\pm 5,8$ °C.

Mentioned expanded uncertainties are obtained by multiplying the standard uncertainties by a coverage factor $k=2$, which corresponded to a level of confidence of 95 %. Standard uncertainties have been determined in accordance with document „EA 4/02“.

7. Declaration

The test results relate to the behaviour of the test specimen 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 of use. The results of tests are concerned only with the subject of testing. The test report shall be reproduced in full only.

Measured by: Vít Slaboch



Test report prepared by: Vít Slaboch

Distribution of test reports:

Copy No. 1 – sponsor

Copy No. 2 – laboratory archive

List of appendixes:

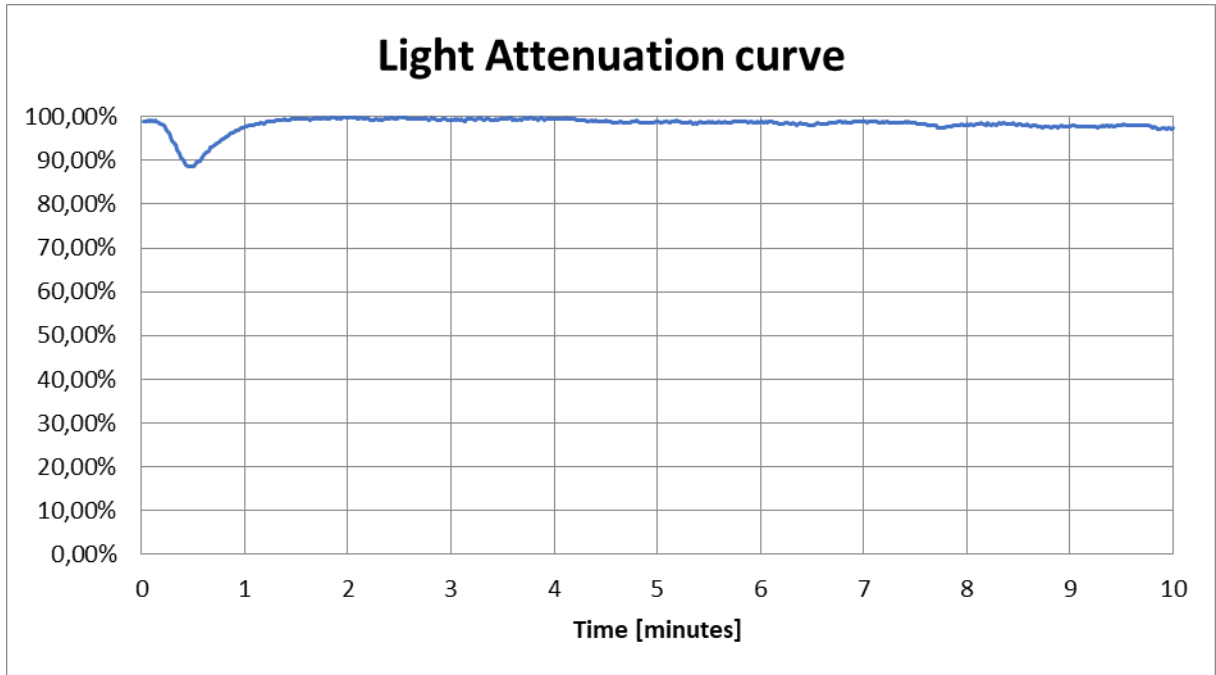
Appendix No. 1: The photograph of the test specimens after testing (test specimen No. 1)

Appendix No. 1: Light attenuation curve and smoke temperature curve (test specimen No. 1)

END OF TEST REPORT



Light attenuation curve - test specimen No. 1:



Smoke temperature curve - test specimen No. 1:

