



## CENTRUM STAVEBNÍHO INŽENÝRSTVÍ a.s.

Zkušebna fyzikálních vlastností materiálů, konstrukcí a budov - Praha  
Zkušební laboratoř č. 1007.4 akreditovaná ČIA dle ČSN EN ISO/IEC 17025  
Pražská 16, 102 00 Praha 10 Hostivař

# TEST REPORT

## No. 19/440/P074



Job No.: Z-19/440/P022

No. of pages: 4 + appendixes

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**Name of test:**

Determination of flammability class of construction products

**Material/product/construction:**

Snapframe 15 - 45 mm

**Sponsor:**

Jansen Display s.r.o.  
Přestanov 5  
403 17 Přestanov

**Manufacturer:**

Jansen Display s.r.o.  
Přestanov 5  
403 17 Přestanov

**Test specimens delivery date:**

12<sup>th</sup> October 2012

**Workplace:**

Fire technical laboratory

**Location:**

Pražská 16, Praha 10 – Hostivař

**Date of test:**

21<sup>st</sup> – 22<sup>nd</sup> November 2012

**Date of issue:**

19<sup>th</sup> October 2016

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## 1. Test assignment

The test has been done on the base of order issued on 28<sup>th</sup> June 2011.

## 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: 15449.

Composition:

Dimensions (1000 x 190 x 12) mm, total weight: 1,440 to 2,160 kg.

- Front side - APET foil (amorphous polyethyleneterephthalate), thickness: 0,75 mm, colour: transparent, density 1150 kg/m<sup>3</sup>.
- Aluminium frame - minimum material thickness 1 mm, width: 15 to 45 mm, colour: silver, density: cca 2700 kg/m<sup>3</sup>
- Backing board - steel plate, thickness 0,5 mm, colour: silver, density: cca 7800 kg/m<sup>3</sup>.
- The APET foil is fixed in aluminium frame directly on backing board.

Fixing of the test specimens: Fixed on the metal holder according to DIN 4102-15, Table 1, method 7.

## 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: 10 days at temperature  $T = (23 \pm 2) ^\circ\text{C}$   
 Testing conditions in laboratory:  $T = 25 ^\circ\text{C}$

relative humidity  $\text{RH} = (50 \pm 3) \%$   
 relative humidity  $\text{RH} = 27 \%$

Measuring and observations	Test specimen No.		
	1	2	3
Residual length of the every test specimen [cm]	54, 48, 45, 48	59, 55, 49, 56	61, 60, 62, 57
Residual length average value of the test specimen [cm]	49	55	60
The highest smoke temperature [ $^\circ\text{C}$ ]	115,6	110,4	105,9
Time to accomplish of the highest temperature of the smoke [min:s]	0:23	0:49	1:03
The highest flame level above the bottom edge of the test specimen [cm]	60	40	45
Time to accomplish the highest flame level [min:s]	0:30	0:45	1:00
Smoke production [%.min]	68,1	59,8	55,6
Maximum light attenuation [%]	12,7	10,6	11,2
Time to accomplish the maximum smoke density [min:s]	301	332	377
Time of sustained burning after end of test [s]	12	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]	15	10	4
Test specimen No 1: Snapframe 15 mm - width of aluminium frame 15 mm Test specimen No 2: Snapframe 30 mm - width of aluminium frame 30 mm Test specimen No 3: Snapframe 45 mm - width of aluminium frame 45 mm			
<b>Observations during the tests:</b> APET foil has melted.			



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

The product *Snapframe 15 - 45 mm* 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. 15449-1/2 issued on 6<sup>th</sup> July 2011 by CSI a.s, Fire technical laboratory.

### Conclusion:

The tested sample of *Snapframe 15 - 45 mm* **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.

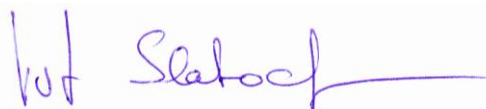
Mentioned expanded uncertainties are obtained by multiplying the standard uncertainties by a coverage factor  $k=2$ , which corresponded to a level of confidence of 95 %. Standard uncertainties have been determined in accordance with document „EA 4/02“.

## 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



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List of appendixes:

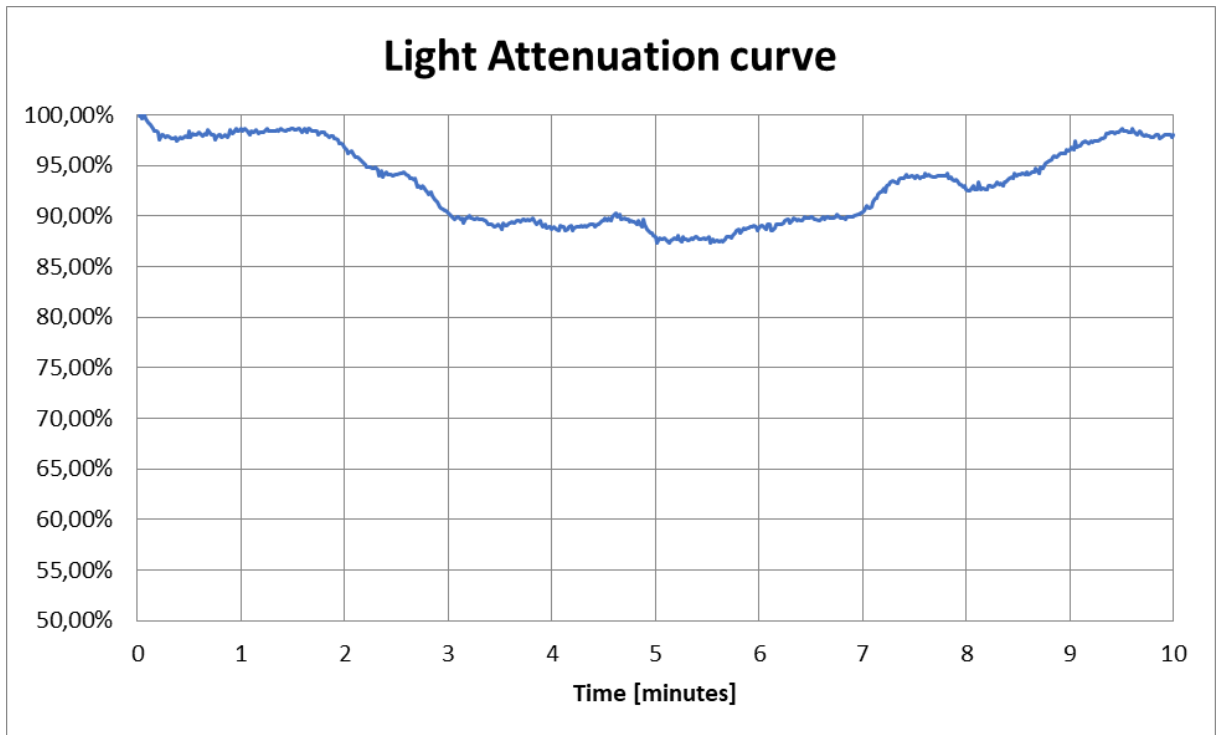
Appendix No. 1: The photograph of the test specimens after testing (test specimen No. 1)

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:

