

TEST REPORT

Order: FE01/2018

Signature: SL/Z-033/EN9239/663a/2018

Police, dnia 26.02.2018 r.

Test methods:

1. EN ISO 9239-1:2010. Reaction to fire tests for floor coverings – Part 1. Determination of the burning behaviour using radiant heat source.
2. EN ISO 11925-2:2010 - Reaction to fire tests – Ignitability of products subjected to direct impingement of flame – Part 2: Single-flame source test

Content of request: Research according to PN-EN 13501-1+A1:2010 (floor).

Sponsor: SOMMER
341 RUE DE LA MAIRIE
59780 BAISIEUX
FRANCE

Material: Synthetic grass OPERA

Composition: - synthetic grass OPERA glued to non-combustible substrate class A2fl-s1
- polyurethane adhesive for synthetic grass
- sand – 7-8 kg/m²

Manufacturer/supplier: SOMMER
341 RUE DE LA MAIRIE
59780 BAISIEUX
FRANCE

Assessment: The tested product fulfils the requirements of **B_n-s1** class according to PN-EN 13501-1+A1:2010.

The reprint and the copying: only with the approval of SOMMER

Without the written consent of the Sychta Laboratory the report can be copied only in one piece.

Report applies only to the sample tested and is not necessarily indicative of the qualities of apparently identical or similar products.

Content of test report: six pages with signature and numbers.

1. Reaction to fire tests for floor coverings according to EN ISO 9239-1

Table 1.1. critical heat flux at extinguishment CHF

Name of measured quantity	Unit	Test direction	
		length direction	cross direction
Critical heat flux at extinguishment CHF	kW·m ⁻²	8,2	-

Name of measured quantity	Unit	Specimen			Average	Standard deviation
		1	2	3		
Mass of the specimen	g	2511,6	2609,2	2489,2	2536,7	63,8
Specimen thickness	mm	40	40	40	40	0
Ignition time	s	497	362	435	431	68
Extinction time	s	1239	724	724	896	297
Duration of the test	s	1800	1800	1800	1800	0
Flame spread distance after 10 min	mm	80	90	70	80	10
Flame spread distance after 20 min	mm	250	90	70	137	99
Maximum flame spread distance	mm	265	90	70	142	107
Critical heat flux at extinguishment CHF	kW·m ⁻²	8,2	11,1	11,1	10,1	1,7

Table 1.2. Time of the movement of the flame front

Distance from exposed of the specimen	Calibration flux levels at the specimen	Time of arrival of the flame front		
		Specimen		
		1	2	3
mm	kW·m ⁻²	s		
110	10,9	711	-	-
160	10,2	853	-	-
210	9,5	1101	-	-
260	8,4	1235	-	-
310	7,3	-	-	-
360	6,2	-	-	-
410	5,1	-	-	-
460	4,2	-	-	-
510	3,6	-	-	-
560	2,9	-	-	-
610	2,6	-	-	-

Table 1.3. Smoke generation

Name of measured quantity	Unit	Specimen			Average	Standard deviation
		1	2	3		
Maximum light attenuation	%	4,6	0,6	0,8	2,0	2,3
Integrated smoke obscuration Sc	% · min	15	1	6	7	7

Remarks: none.

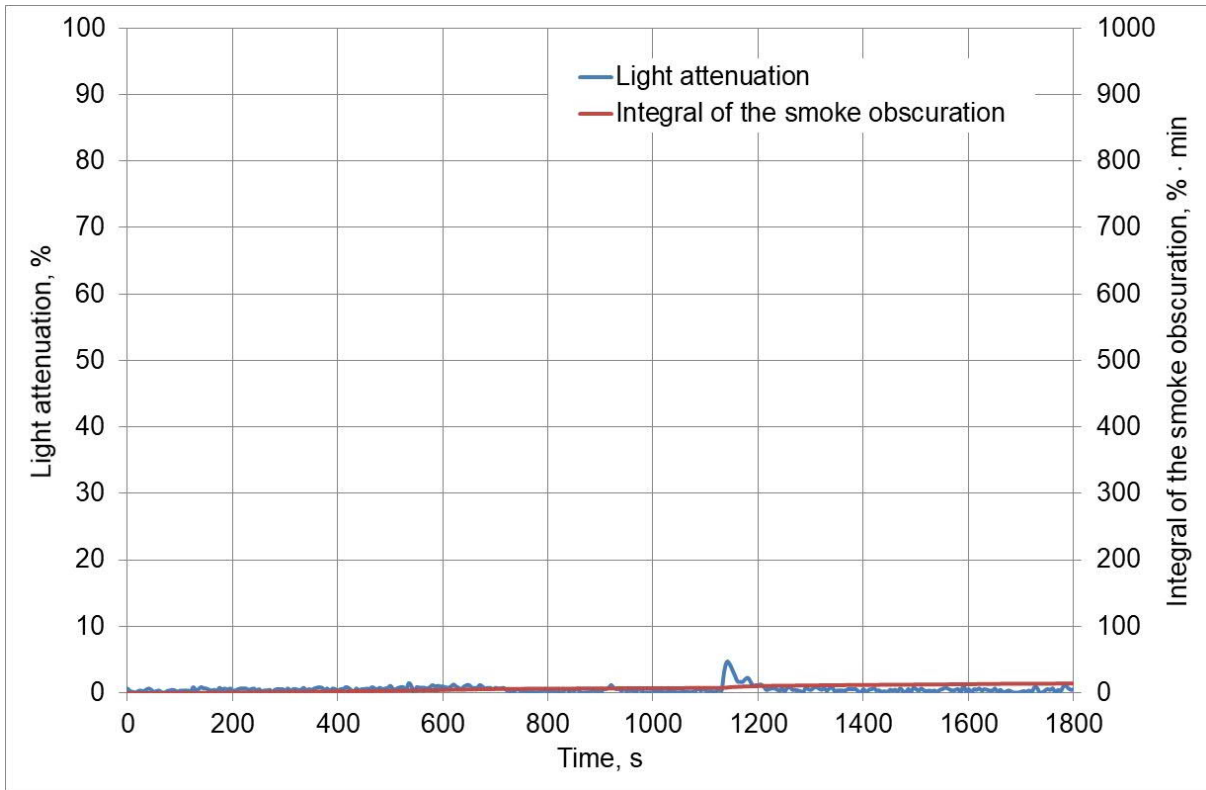


Fig. 1. Smoke generation during the test - specimen 1

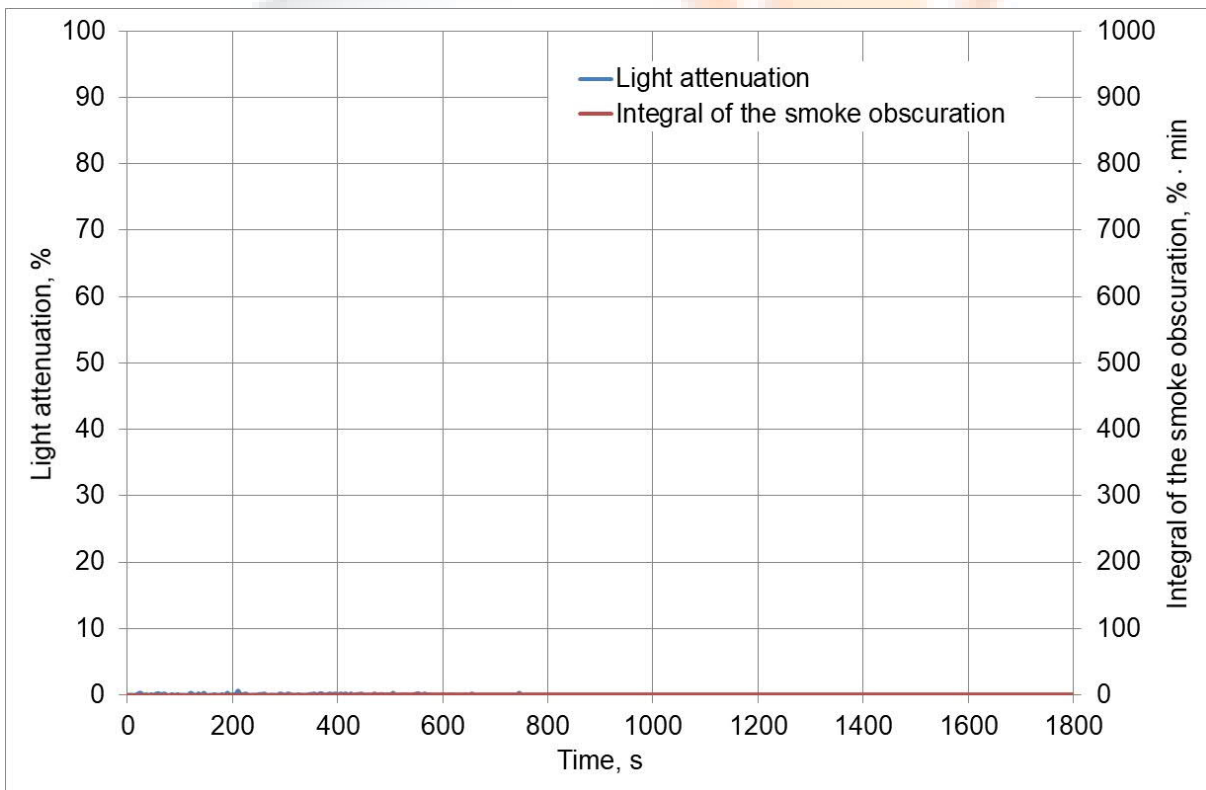


Fig. 2. Smoke generation during the test - specimen 2

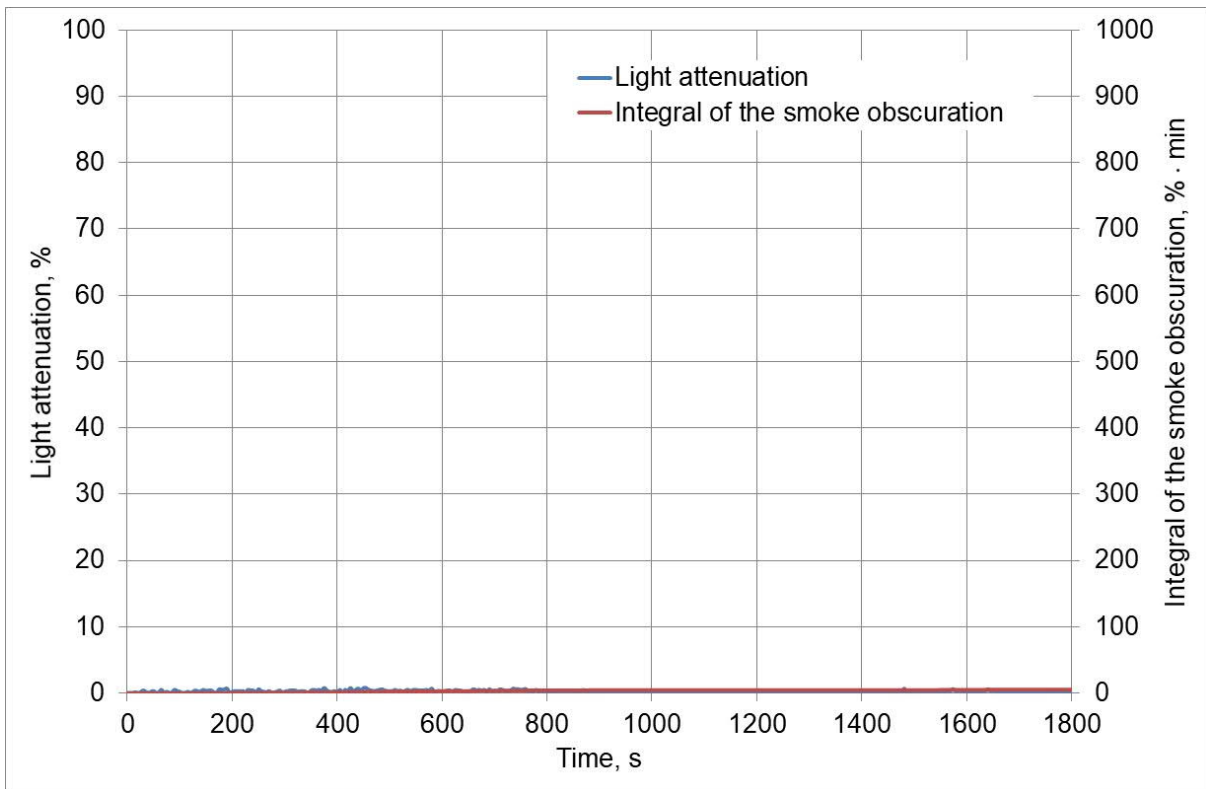


Fig. 3. Smoke generation during the test - specimen 3



Fig. 4. Appearance of the specimen after the test

2. Ignitability of products subjected do direct impingement of flame according to EN ISO 11925-2

Surface ignition

Exposure time of pilot burner flame - 15 s

Name of measured quantity	Unit	Specimen no./Test direction						Average
		lenght direction			cross direction			
		1	2	3	4	5	6	
Ignition of specimen	YES/NO	NO	NO	NO	-	-	-	
Ignition of paper	YES/NO	NO	NO	NO	-	-	-	
Flame spread > 150 mm	YES/NO	NO	NO	NO	-	-	-	
Time of arrival of the flame front 150 mm	s	-	-	-	-	-	-	-

Edge ignition

Exposure time of pilot burner flame - 15 s

Name of measured quantity	Unit	Specimen no./Test direction						Average
		lenght direction			cross direction			
		1	2	3	4	5	6	
Ignition of specimen	YES/NO	-	-	-	-	-	-	
Ignition of paper	YES/NO	-	-	-	-	-	-	
Flame spread > 150 mm	YES/NO	-	-	-	-	-	-	
Time of arrival of the flame front 150 mm	s	-	-	-	-	-	-	-

Remarks: none.



Fig. 5. Appearance of the specimen after the test

3. Final findings

Test method	Parameter/Unit	Measured value	Critical value	Classification
EN ISO 9239-1	CHF/HF-30, kW·m ²	10,1	≥ 8,0	B_f
	Sc, % · min	7	≤ 750	s1
EN ISO 11925-2 Exposure time 15 s	F _s > 150 mm in 20 s,	≤ 150	≤ 150	-

The tested product fulfils the requirements for **B_f-s1** class according to EN 13501-1+A1:2010.

The term reaction to fire class and the level of smoke decomposition and combustion products was taken in order to assess the fulfillment of the research.

4. Remaining required information

System of the sampling: sponsor took and delivered samples.

Date of sample arrival: 26.01.2018, 31.01.2018 (sand), 15.02.2018 (glue)

Description of the samples: one piece of a synthetic grass, colour green, dimension of 1530x1330 mm, thickness of 40 mm, weight per unit area about 2,3 kg/m², sand (25 kg) and polyutrthabe adhesive for stnthetic grass (NOVOFLOOR P21 GREEN – 7 kg) were delivered by the sponsor. Laboratory prepared samples for the tests.

Description of the substrate and fixing to the substrate: Tested composition: the synthetic grass glued to a standard non-combustible substrate according to EN 13238:2010- fibre cement board with thickness (8 ± 2) mm, with density (1 800 ± 200) kg/m³ and with classification A2_f-s1 - with sand 7-8 kg/m².

Conditioning of specimens: constant mass at a temperature of 23±2 °C, and relative humidity of 50±5 °C according to EN 13238:2010.

Declaring: The test results rate to the behaviour of the test specimens under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the products in use.

Operator:



mgr inż. Andrzej Sychta

SYCHTA LABORATORIUM Sp. J.
72-010 Police, ul. Ofiar Stutthofu 90
tel./fax +48 91 4210 214, tel. 502078855
e-mail: biuro@sychta.eu www:sychta.eu
KRS 0000387681 REGON 321023120
NIP 8513152392

Signature:



KIEROWNIK TECHNICZNY
dr inż. Krzysztof Sychta

Date and place of test: 21.02.2018, Police