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Laboratorium Badań Palności Materiałów
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72-010 Police

AB 1501

TEST REPORT

Order no: 10.05.2021 Signature: SL/Z-489/DIN4102-B1/561a/2021 Police, 04.08.2021

Test methods:

1. DIN 4102-1:1998-05 Fire behaviour of building materials and building components - Part 1: Building materials; concepts, requirements and tests.
2. EN ISO 9239-1:2010. Reaction to fire tests for floor coverings – Part 1. Determination of the burning behaviour using radiant heat source. Equivalent of DIN 4102-14:2015-09 Fire behaviour of building materials and building components - Part 14: "Brandschacht" tests
3. DIN 53438-2:1984-06 Testing of combustible materials; response to ignition by a small flame; edge ignition
4. DIN 53438-3:1984-06 Testing of combustible materials; response to ignition by a small flame; surface ignition

Content of request: Testing according to DIN 4102-1:1998-05 (floor coverings class B1)

Sponsor: Continental Grafix AG
Lettenstrasse 2
6343 Rotkreuz
Switzerland

Material: Ultra Protection Laminate

Composition: Cleare textured vinyl = 600micron +/-20micron

Manufacturer/supplier: Continental Grafix AG
Lettenstrasse 2
6343 Rotkreuz
Switzerland

Assessment: The material fulfils the requirements of the building class B1 according to DIN 4102-1:1998-05

Validity of test report: 04.08.2026

The reprint and the copying: only with the agreement of Continental Grafix AG.

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: seven pages with signature and numbers.

1. Test results class B1 according to DIN 4102-14: 2015-09 - Brandschacht tests (EN ISO 9239-1:2010)

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	$kW \cdot m^{-2}$	>11	-

Name of measured quantity	Unit	Specimen			Average	Standard deviation
		1	2	3		
Mass of the specimen	g	166,7	158,0	160,4	161,7	4,5
Specimen thickness	mm	0,6	0,6	0,6	0,6	0,0
Ignition time	s	358	138	146	214	125
Extinction time	s	722	725	723	723	2
Duration of the test	s	1800	1800	1800	1800	0
Flame spread distance after 10 min	mm	70	90	80	80	10
Flame spread distance after 20 min	mm	70	90	80	80	10
Maximum flame spread distance	mm	70	90	80	80	10
Critical heat flux at extinguishment CHF, requirement ≥ 4,5	$kW \cdot m^{-2}$	>11	>11	>11	>11	-

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	$kW \cdot m^{-2}$	s		
110	10,9	-	-	-
160	10,2	-	-	-
210	9,5	-	-	-
260	8,4	-	-	-
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	%	18,5	34,4	31,5	28,1	8,5
Integrated smoke obscuration Sc, requirement ≤ 750	% · min	64	70	65	66	3

Remarks: none.

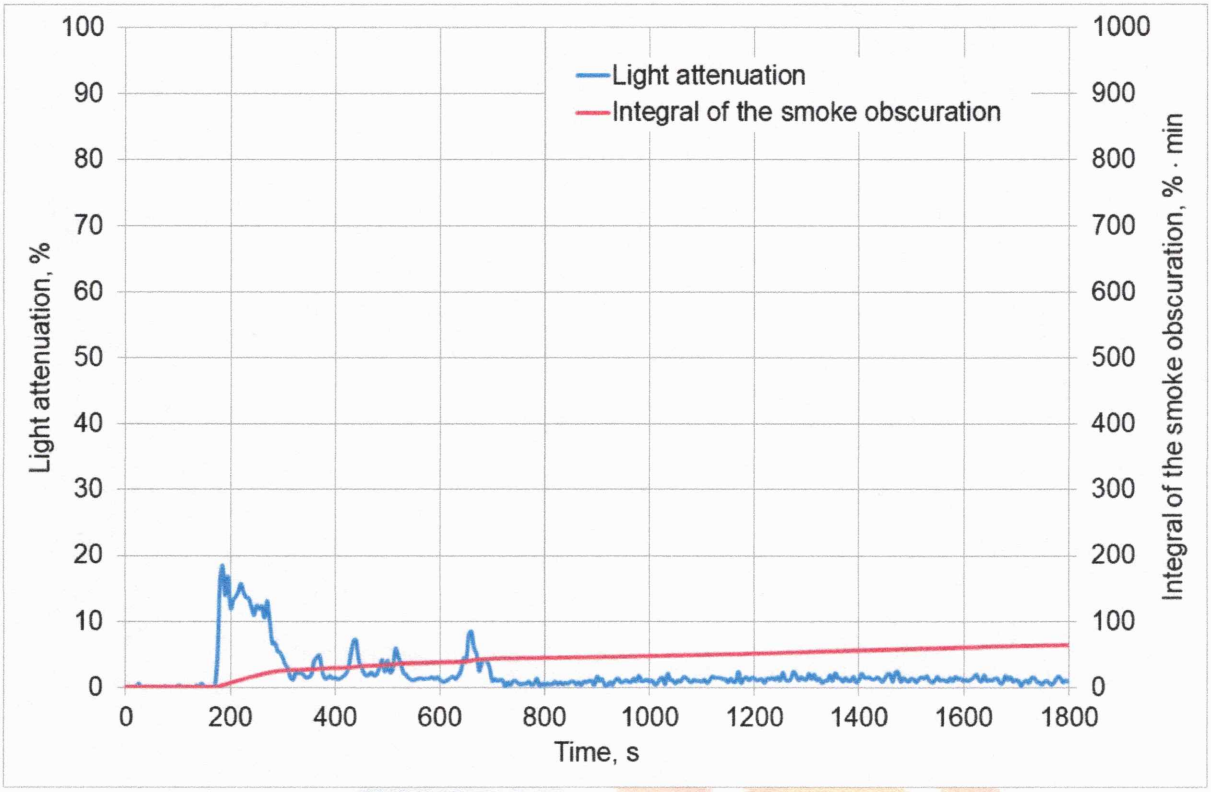


Fig. 1. Smoke generation during the test - specimen 1

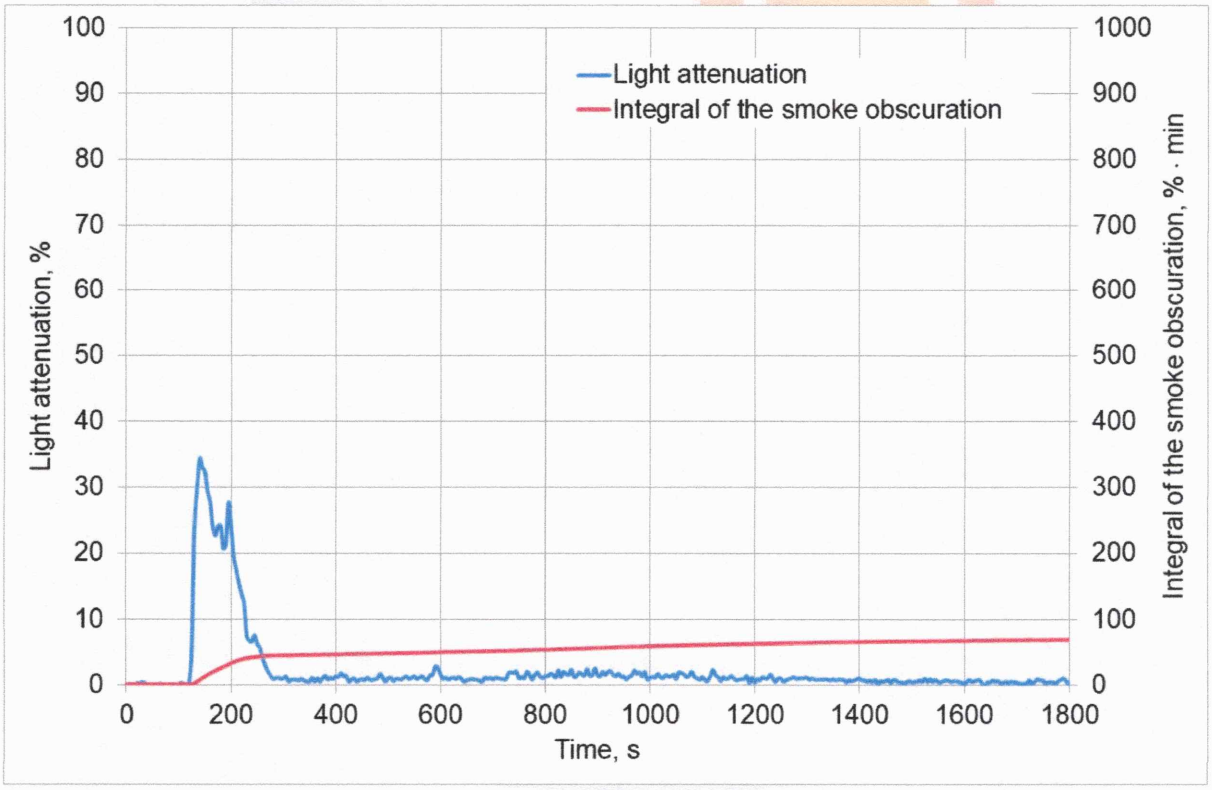


Fig. 2. Smoke generation during the test - specimen 2

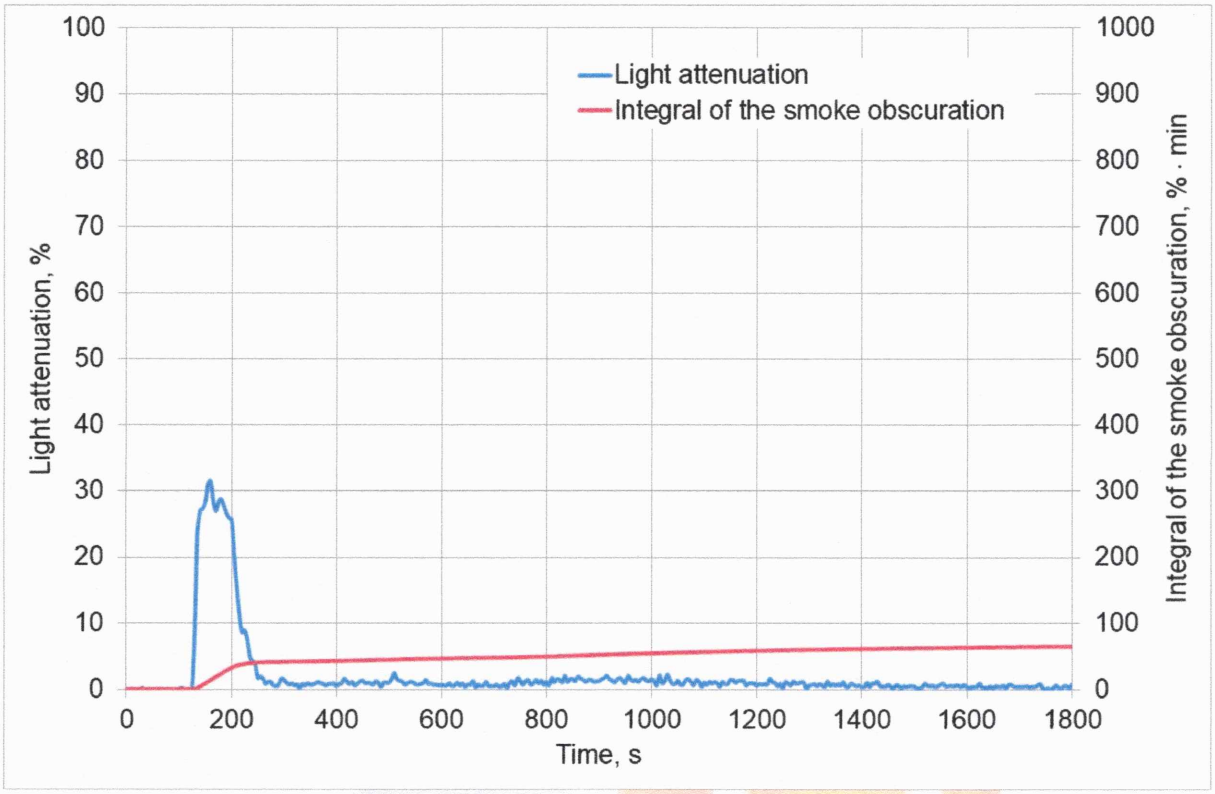


Fig. 3. Smoke generation during the test - specimen 3

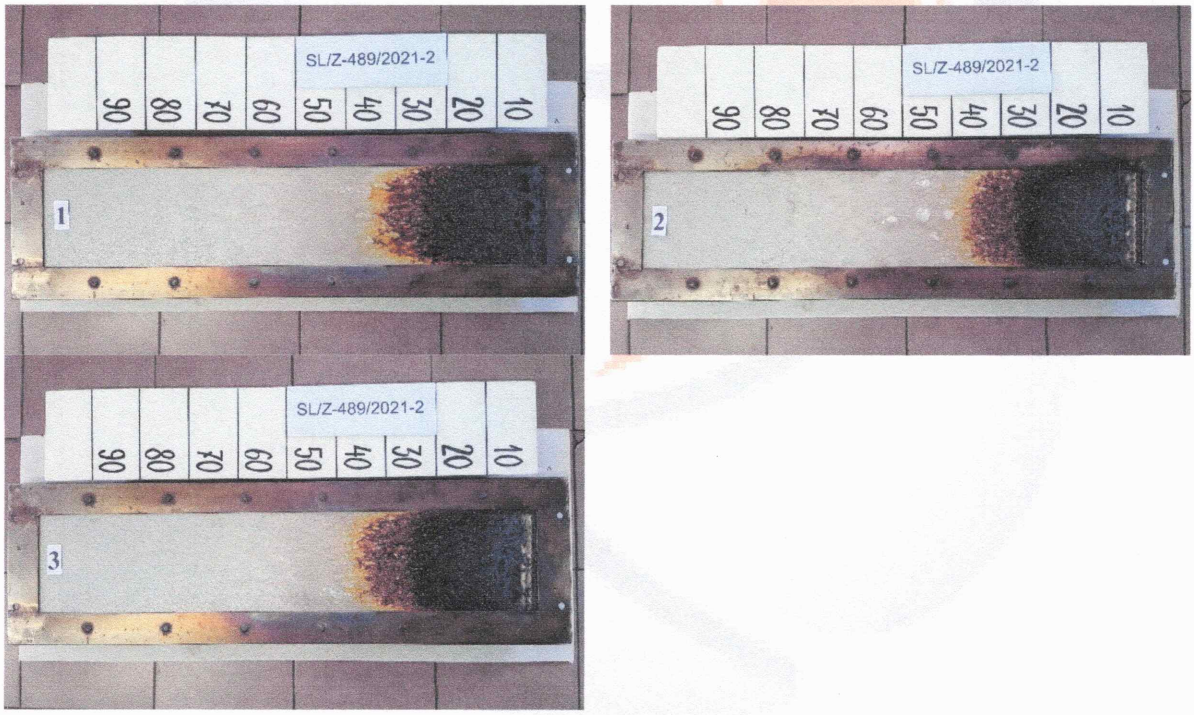


Fig. 4. Appearance of the specimens after the test

2. Test results class B2 according to DIN 4102-1 (DIN 53438-2 and DIN 53438-3: 1984-06)

2.1. Surface ignition

Exposure time of pilot burner flame - 15 s
Time from start of test.

Name of measured quantity	Unit	Specimen no./Test direction									
		length direction					cross direction				
		1	2	3	4	5	6	7	8	9	10
Specimen thickness	mm	0,6	0,6	0,6	0,6	0,6	-	-	-	-	-
Ignition time	s	7	9	6	6	5	-	-	-	-	-
Flame height 150 mm within 20 s	yes/no	no	no	no	no	no	-	-	-	-	-
Max. flame height	cm	5	5	4	7	5	-	-	-	-	-
Time	s	-	-	-	-	-	-	-	-	-	-
Extinction time	s	17	16	16	17	16	-	-	-	-	-
Flaming particles or droplets	yes/no	no	no	no	no	no	-	-	-	-	-
Ignition of paper	yes/no	no	no	no	no	no	-	-	-	-	-
Smoke development (visual impression)	-	moderately smoke emission									

Remarks: none.

2.2. Edge ignition

Exposure time of pilot burner flame - 15 s
Time from start of test.

Name of measured quantity	Unit	Specimen no./Test direction									
		length direction					cross direction				
		1	2	3	4	5	6	7	8	9	10
Specimen thickness	mm	0,6	0,6	0,6	0,6	0,6	-	-	-	-	-
Ignition time	s	1	0	1	1	1	-	-	-	-	-
Flame height 150 mm within 20 s	yes/no	no	no	no	no	no	-	-	-	-	-
Max. flame height	cm	6	5	5	6	5	-	-	-	-	-
Time	s	-	-	-	-	-	-	-	-	-	-
Extinction time	s	16	16	16	16	16	-	-	-	-	-
Flaming particles or droplets	yes/no	no	no	no	no	no	-	-	-	-	-
Ignition of paper	yes/no	no	no	no	no	no	-	-	-	-	-
Smoke development (visual impression)	-	moderately smoke emission									

Remarks: none

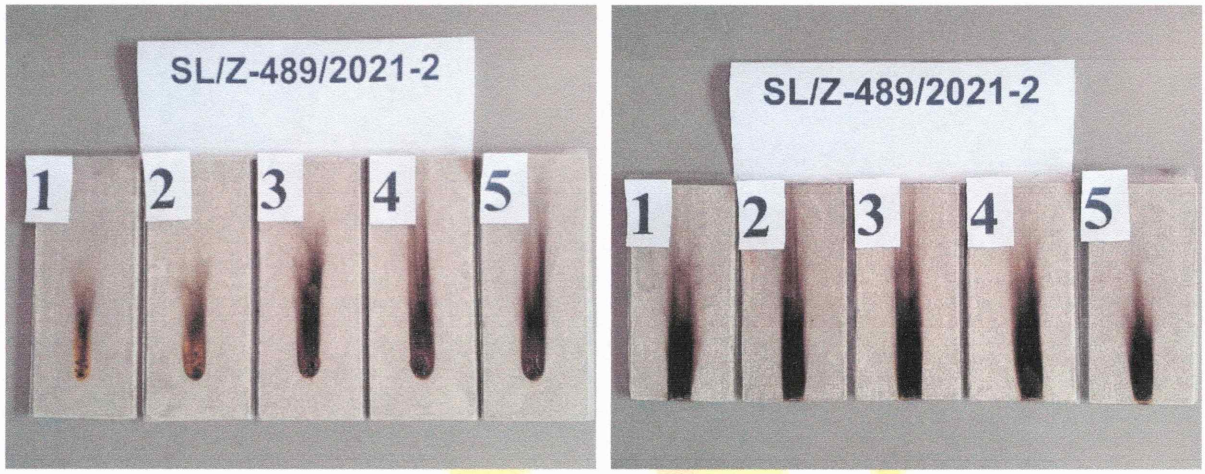


Figure 5. Appearance of the specimens after the small burner test

3. Assessment

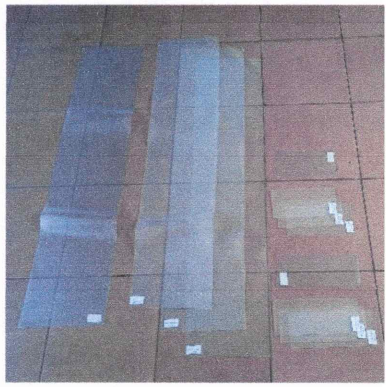
The determined test results show that the material fulfils the requirements of the building class B2 according to DIN 4102-1:1998-05.

The determined test results show that the material fulfils the requirements **of the building class B1** according to DIN 4102-1:1998-05.

In combination with other materials (for example coatings, deposits) the burning behaviour could be influenced unfavourable so that the classification above is not valid any longer. According to DIN 4102-1 the burning behaviour in combination with other materials has to be tested separately.

This report does not determine admission to the use of the product, when tested material is used as a construction product within the meaning of terrestrial technical requirements.
In the process of construction supervision test results can be the basis for a preliminary assessment of the compatibility/suitability.

4. Remaining required information



Date of receipt of samples: 16.07.2021

Sampling: sponsor took and delivered samples.

Description of the test material: self-adhesive transparent foil "UltraProtection Laminate" on the carrier foil, total thickness of approximately 0,6 mm thick and weight per unit area about 700 g/m^2. 4 samples dimension of 1040x230-235 mm, 4 samples dimension of 230-231x90-92 mm and 4 samples dimension of 197-198x90 mm were delivered by the sponsor. Laboratory prepared samples for the tests according to DIN 53438-2 and DIN 53438-3

Conditioning of specimens: after storing 14 days before the tests or constant mass at temperature of 23±2 ° C and relative humidity of 50±5 % (DIN 50014-23/50-2).

Description of the substrate and fixing to the substrate: material was 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/m^3 and with classification A2$_{fl}$-s1.

Declarations:

1. The test results relate 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.
2. The information provided on the first page of the report concerning the scope of research and identification of the tested object/objects was provided by the Sponsor.

Operators:

mgr inż. Andrzej Sychta

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dr inż. Krzysztof Sychta

Date and place of test - 20.07 and 02.08.2021, Police