

TEST REPORT

Order no: 03.08.2021

Signature: SL/Z-710/EN13823/906a/2021

Police, 29.11.2021

Test methods:

1. EN 13823:2018. Reaction to fire tests of building products – Building products excluding floorings exposed to the thermal attack by a single burning item.
2. EN ISO 1716:2018. Reaction to fire tests for products - Determination of the gross heat of combustion (calorific value) (ISO 1716:2010).

Content of request: Tests according to EN 13501-1:2018, class A2.

Sponsor: Quin Global UK LTD
Unit 1A Ruthvenfield Avenue
Inveralmond Industrial Estate
Perth PH13WB, United Kingdom

Material: TensorGrip M81- SBR Rubber based adhesive

Composition: Adhesive: SBR Rubber based adhesive
Application: mass of dry adhesive per unit area: 16 g/m²

Manufacturer/supplier: Quin Global UK LTD
Unit 1A Ruthvenfield Avenue
Inveralmond Industrial Estate
Perth PH13WB, United Kingdom

Assessment: The tested product fulfils the requirements of A2-s1,d0 class according to EN 13501-1:2018.

The reprint and the copying: only with the agreement of Quin Global UK LTD

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

Contain of test report: eight pages with signature and numbers.

1. Reaction to fire tests of building products according to EN 13823

1.1. Heat release rate

Name of measured quantity	Unit	Specimen			Average	Standard deviation
		1	2	3		
Duration of the test	s	1560	1560	1560	1560	0
Maximum heat release rate	kW	4,3	5,8	5,3	5,1	0,8
Total heat release THR	MJ	0,3	0,6	0,7	0,5	0,2
Total heat release in the first 600 s – THR_{600s}	MJ	0,3	0,6	0,7	0,5	0,2
Fire growth rate index $FIGRA_{0,2MJ}$	$W \cdot s^{-1}$	0	46	52	33	28
Fire growth rate index $FIGRA_{0,4MJ}$	$W \cdot s^{-1}$	0	0	0	0	0

Remarks: none.

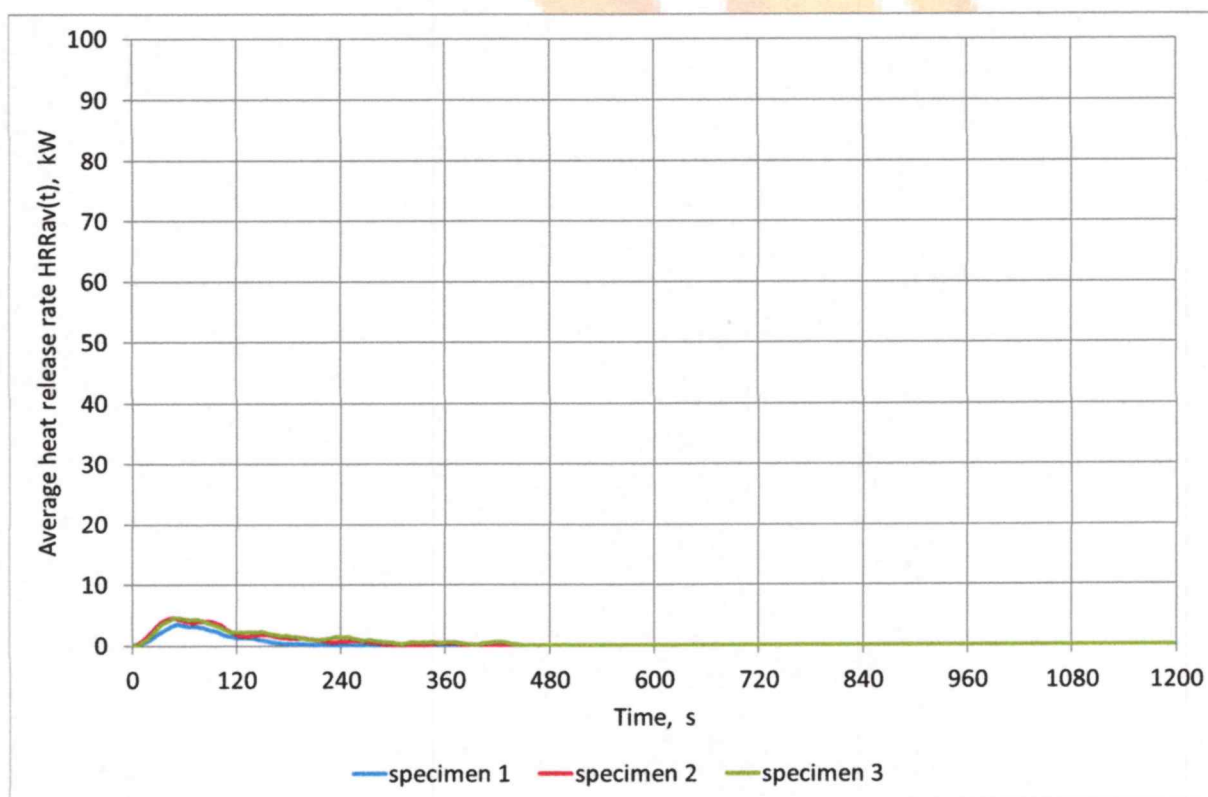


Figure 1.1. Average heat release rate $HRR_{av}(t)$, kW

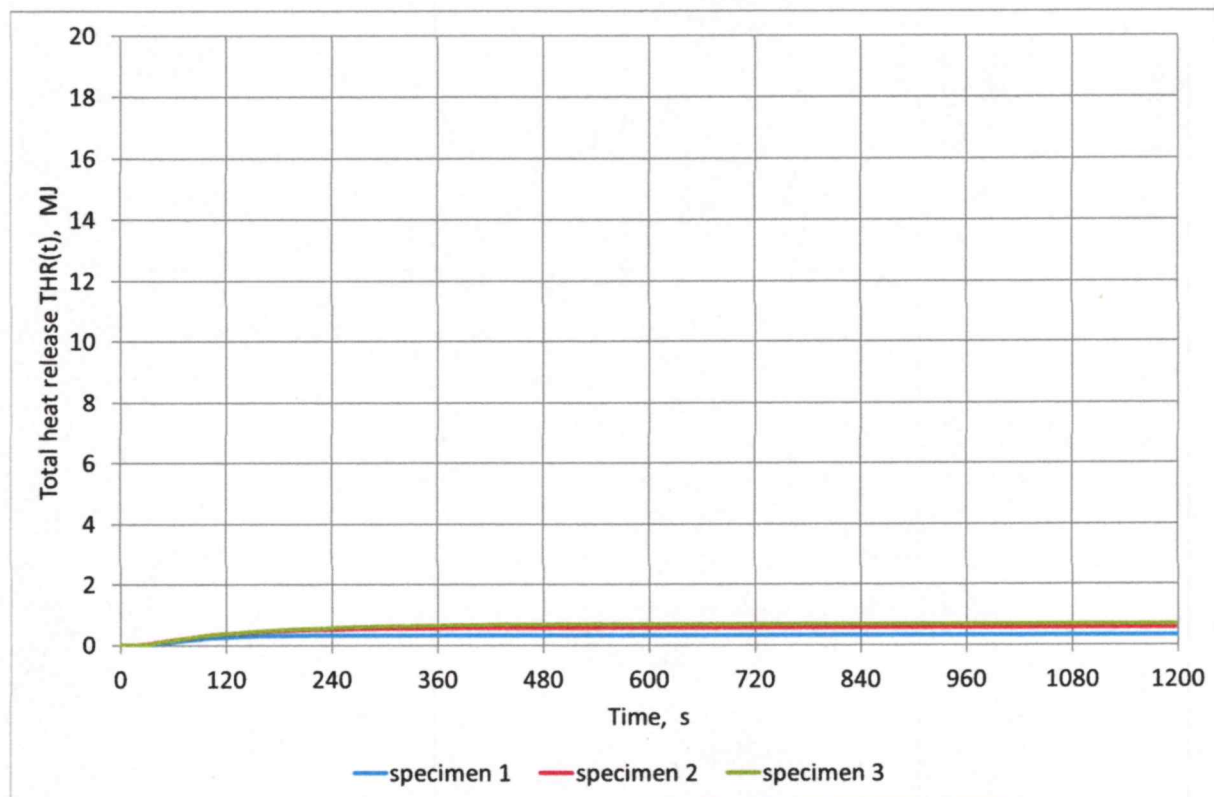


Figure 1.2. Total heat release $THR(t)$, MJ

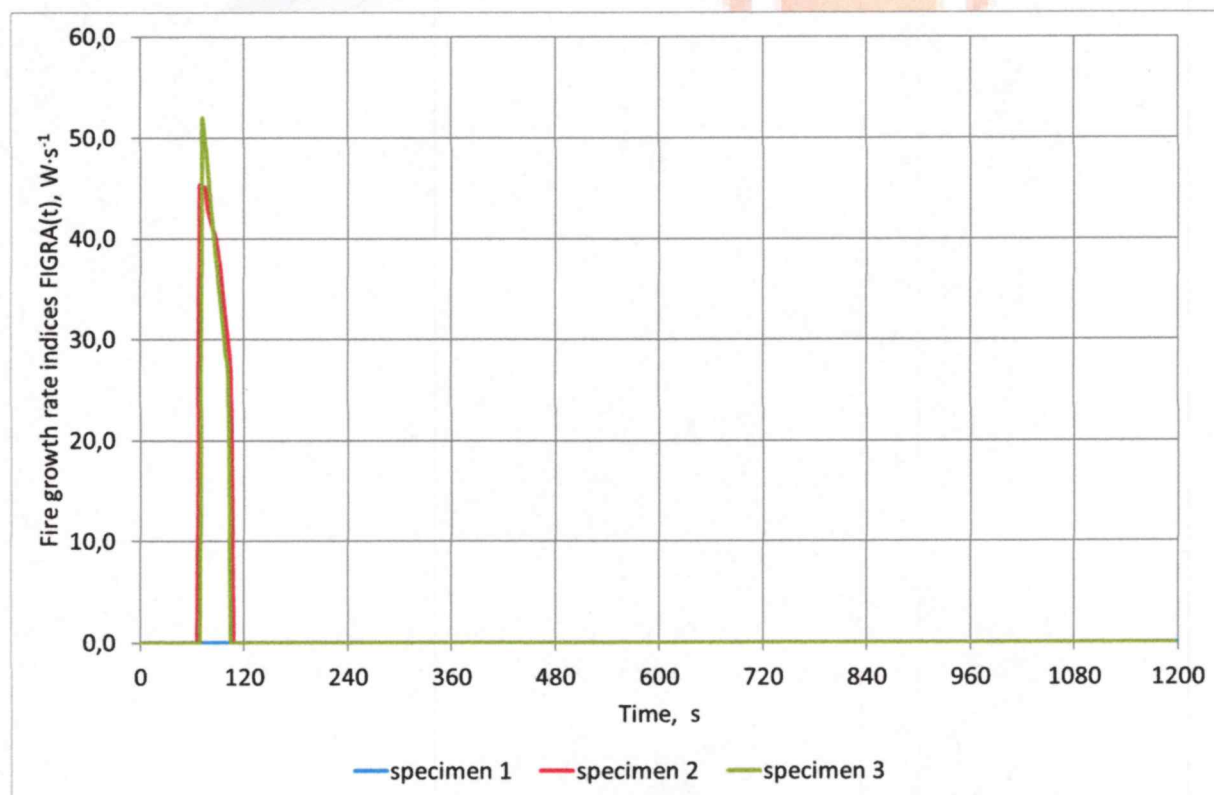


Figure 1.3. Fire growth rate index $FIGRA(t)$, $W \cdot s^{-1}$

1.2. Smoke production rate

Name of measured quantity	Unit	Specimen			Average	Standard deviation
		1	2	3		
Maximum light attenuation	%	4,5	5,8	5,5	5,3	0,7
Max. smoke production rate SPR	$\text{m}^2 \cdot \text{s}^{-1}$	0,0	0,0	0,0	0,0	0,0
Total smoke production - TSP	m^2	45	43	49	46	3
Total smoke production in the first 600 s - TSP _{600s}	m^2	22	20	23	21	2
Smoke growth rate index SMOGRA	$\text{m}^2 \cdot \text{s}^{-2}$	0	0	0	0	0

Remarks: none.

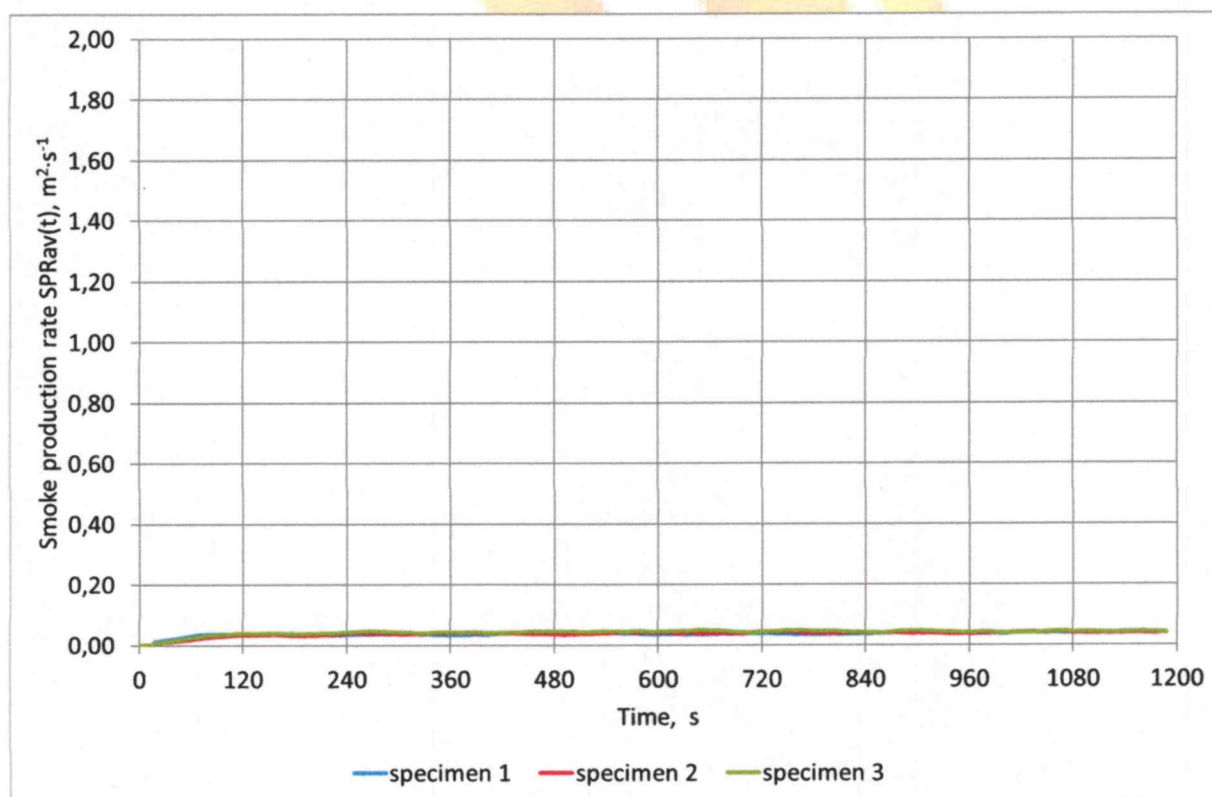


Figure 1.4. Smoke production rate $\text{SPR}_{\text{av}}(t)$, $\text{m}^2 \cdot \text{s}^{-1}$

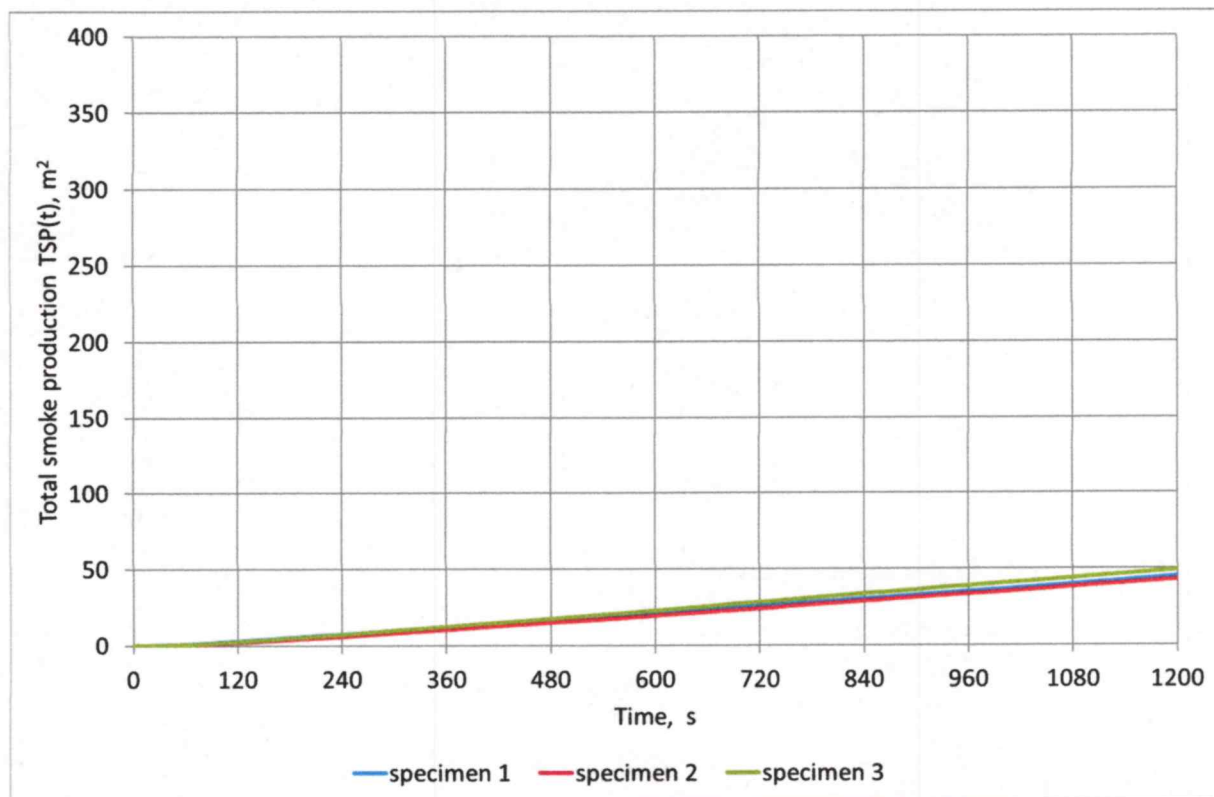


Figure 1.5. Total smoke production TSP(t), m²

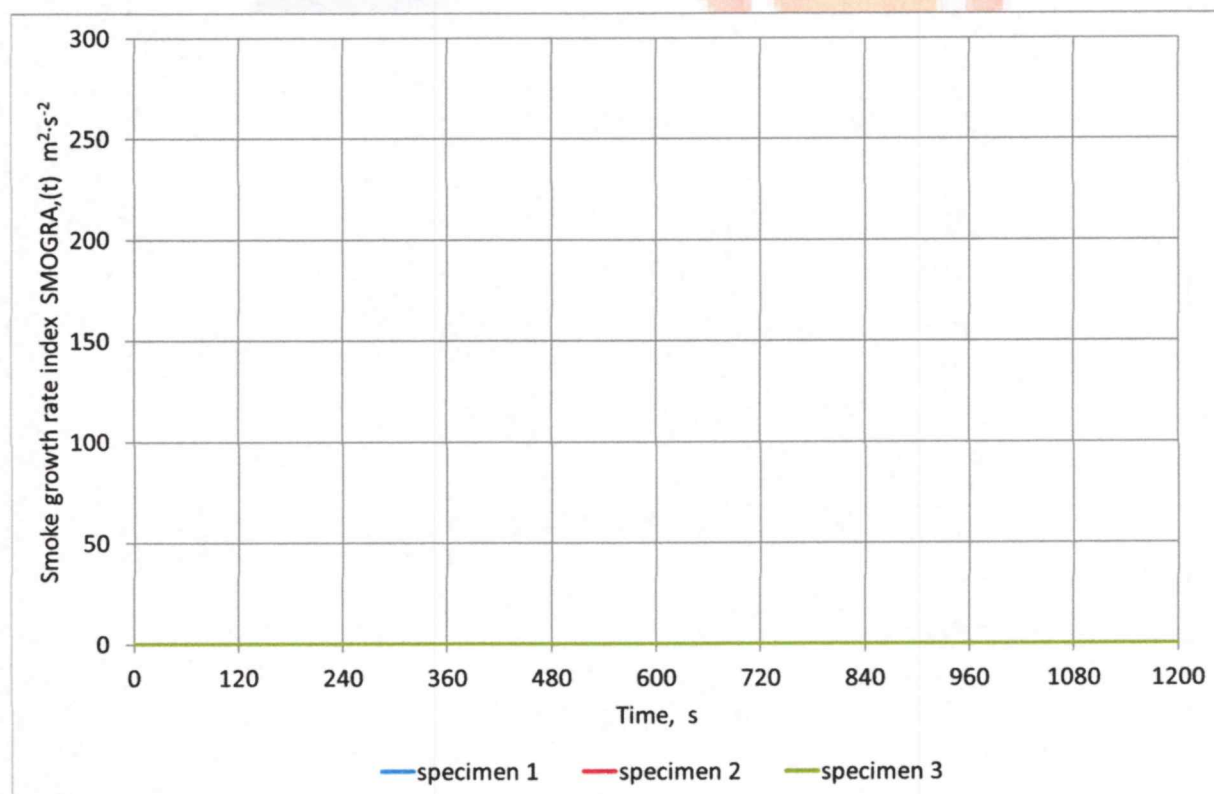


Figure 1.6. Smoke growth rate index SMOGRA(t), m²·s⁻²

1.3. Appearance of the specimen

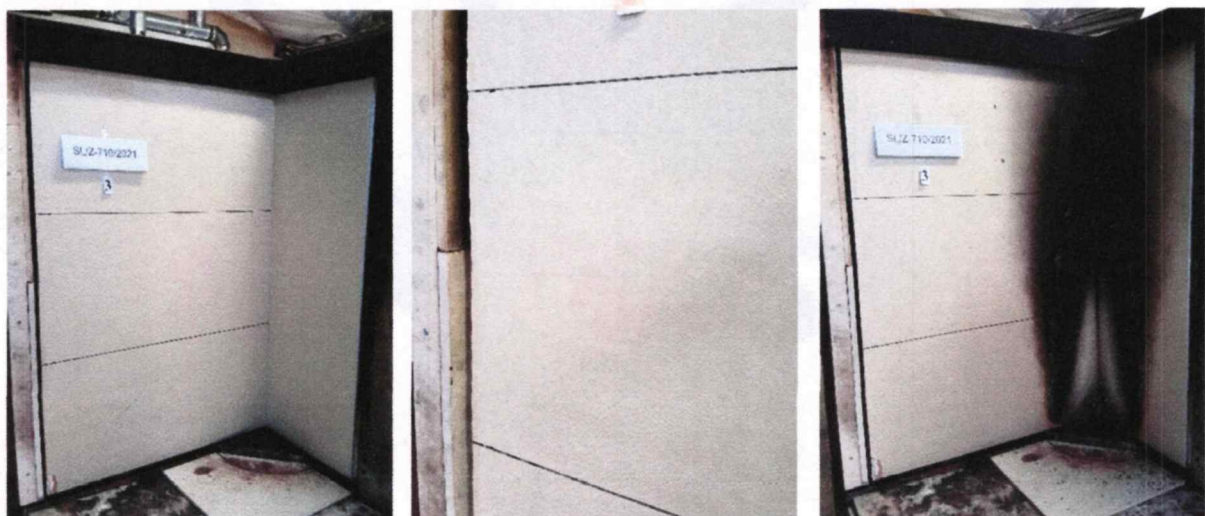
Specimen 1



Specimen 2



Specimen 3



2. Determination of the gross heat of combustion (calorific value)

2.1. Calorific value of internal non-substantial component - glue

Table 2.1 Findings of calorific value

Name of measured quantity	Unit	Specimen			Average	Standard deviation
		1	2	3		
Mass of specimen	g	0,1771	0,1917	0,1929	0,1872	0,0088
Relative specimen mass loss	%	0,0	0,2	0,2	0,1	0,1
Mass of firing wire	g	0,0060	0,0059	0,0057	0,0059	0,0002
Gross calorific value of firing wire	kJ/g	6,6989	6,6989	6,6989	6,6989	0,0000
Mass of benzoic acid	g	0,1753	0,1907	0,1907	0,1856	0,0089
Gross calorific value of benzoic acid	kJ/g	26,448	26,448	26,448	26,448	0,0000
Mass of cotton	g	0,0755	0,0745	0,0752	0,0751	0,0005
Gross calorific value of cotton	g	17543,0	17543,0	17543,0	17543,0	0,0
Calorimeter temperature at the beginning of the main period	°C	22,342	22,892	22,586	22,607	0,276
Maximum temperature attained during the main period	°C	23,589	24,231	23,933	23,918	0,321
Time of arrival of the maximum calorimeter temperature	s	830	825	825	827	3
Main period time	s	530	525	525	527	3
Temperature corrections for heat transfer between the calorimeter and the water	°C	-0,002	0,003	0,004	0,002	0,003
Amounts of heat introduces by burning of the substances used for firing	kJ	5,90	6,29	6,30	6,16	0,23
Water calorimetric equivalent	kJ/°C	10,96	10,96	10,96	10,96	0,00
Gross calorific potential C	MJ/kg	43,8	43,9	44,1	43,9	0,2

Application - mass of dry adhesive per unit area – 16 g/m².

Gross calorific potential Q_{PCS} - 0,70 MJ/m²

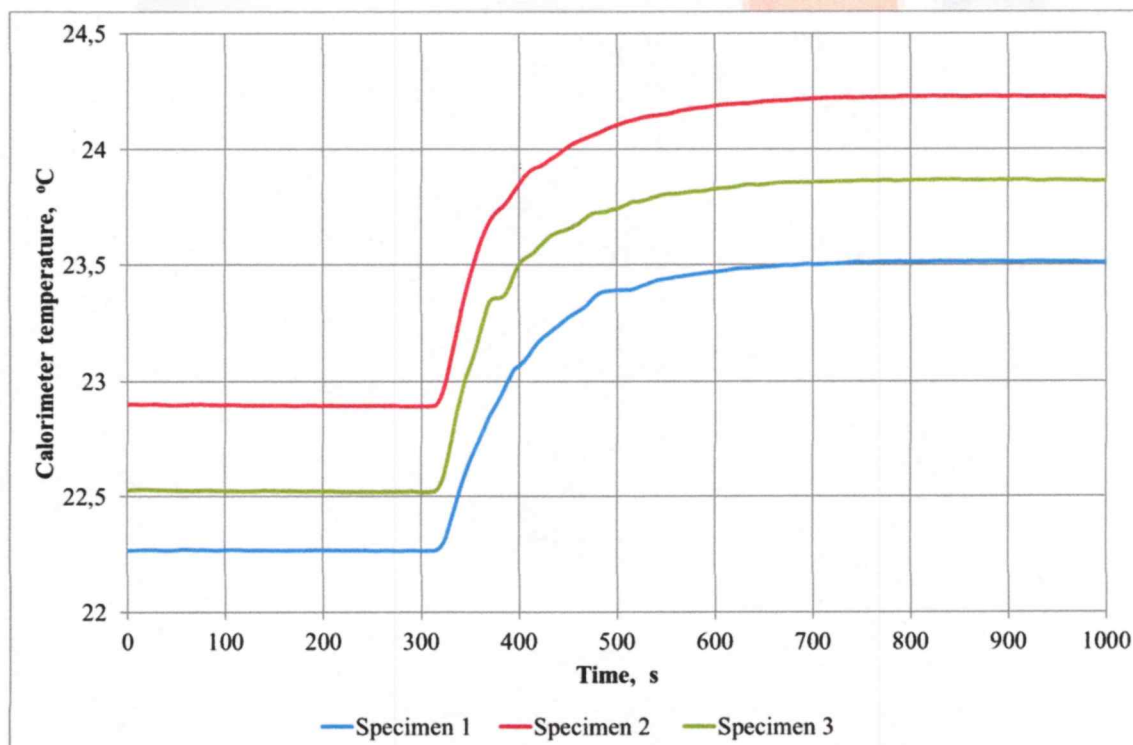


Figure 2.1. The relation of the calorimeter temperature and the time (with correction of the beginning temperature)

Remarks: none.

3. Final findings

Test method	Parameter/Unit	Measured value	Critical value	Classification
EN ISO 1716 (paint)	Q _{PCS} , MJ/m ²	0,70	≤ 4,0	A2
EN 13823	FIGRA, W/s	33	≤ 120	
	THR _{600s} , MJ	0,5	≤ 7,5	
	LFS < edge	YES	YES	
	SMOGR _A , m ² ·s ⁻²	0	≤ 30	s1
	TSP _{600s} , m ²	21	≤ 50	
	Flaming particles or droplets, time s	NO	NO	d0

The tested product meets the requirements of **A2-s1,d0** class according to EN 13501-1:2018

4. Remaining required information

Date of receipt of samples: 18.10 and 04.11.2021

Sampling: sponsor took and delivered samples.

Description of the samples: gypsum plasterboard covered with glue described as "TensorGrip M81". Total thickness of 12,5-12,6 mm, and weight per unit area approx. 7,5 kg/m². 3 samples dimension of 1000x1500 mm, 3 samples dimensions of 500x1500 mm, 10 samples dimension of 250x90 mm and one container of glue (light yellow liquid) were delivered by the sponsor.

Conditioning of specimens: constant mass at a temperature of 23±2 °C, and relative humidity of 50±5 %.

Description of the substrate and fixing to the substrate: material was tested on standard substrate of classes A2-s1-d0 according EN 13238: 2011 section 5.3 – gypsum plasterboard with thickness 12,5±0,5 mm and density 700 ±100 kg/m³.

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 were provided by the Sponsor.

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KIEROWNIK TECHNICZNY

Date and place of test : 15.11 and 19.11.2021, Police

