

## TEST REPORT

Order no: 83A37423

Signature: SL/Z-505/DIN4102-B1/0673a/2026

Police, 12.05.2026

### 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. DIN 4102-15:1990-05 Fire behaviour of building materials and building components - Part 15: "Brandschacht"
3. DIN 4102-16:2021-01 Fire behaviour of building materials and building components - Part 16: "Brandschacht" tests
4. DIN 53438-2:1984-06 Testing of combustible materials; response to ignition by a small flame; edge ignition
5. DIN 53438-3:1984-06 Testing of combustible materials; response to ignition by a small flame; surface

**Content of request:** Testing according to DIN 4102-1:1998-05 (building class B1).

**Sponsor:** Camira Fabrics  
The Watermill, Wheatley Park  
WF14 8HE Mirfield, West Yorkshire, United Kingdom

**Material:** Citadel

**Composition:** 100% Flame Retardant Polypropylene  
(Light Shade) Redoubt Batch: 582350  
(Medium Shade) Redstone Batch: 586326  
(Dark Shade) Craven Batch: 587977  
Thickness: 1,1 mm nominal  
Weight per unit area: 230 g/m<sup>2</sup>

**Manufacturer/supplier:** Camira Fabrics  
The Watermill, Wheatley Park  
WF14 8HE Mirfield, West Yorkshire, United Kingdom

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

*The decision-making method used:* the principle of simple acceptance in accordance with section 4.2 of the ILAC-G8:09/2019 guidelines.

**Validity of test report:** 12.05.2031

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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.

**Content of test report:** eight pages with signature and numbers.

## 1. Test results class B1 according to DIN 4102-15 and DIN 4102-16 – Brandschacht tests

Table 1.1. Results for tested material – “Citadel”

| Name of measured quantity                                        | Unit   | Specimen |     |     |     | Requirement |
|------------------------------------------------------------------|--------|----------|-----|-----|-----|-------------|
|                                                                  |        | 1        | 2   | 3   | 4   |             |
| No. test arrangement according to DIN 4102-15                    | -      | 1        | 1   | 1   | 1   |             |
| Specimen thickness                                               | mm     | 1,1      | 1,1 | 1,1 | 1,1 |             |
| Maximum flame height                                             | cm     | 30       | 30  | 30  | 30  |             |
| Time                                                             | s      | 5        | 5   | 5   | 5   |             |
| Flaming time                                                     | s      | 21       | 24  | 19  | 17  |             |
| Ignition sample backside                                         | yes/no | no       | no  | no  | no  |             |
| Time                                                             | s      | -        | -   | -   | -   |             |
| Burning droplets                                                 | yes/no | yes      | yes | yes | yes |             |
| Duration falling of burning droplets                             | s      | 60       | 15  | 25  | 71  |             |
| - sporadic falling of burning droplets                           | yes/no | yes      | yes | yes | yes |             |
| - continuous falling of burning droplets                         | yes/no | no       | no  | no  | no  |             |
| Burning separating sample parts                                  | yes/no | no       | no  | no  | no  |             |
| Duration falling of burning parts                                | s      | -        | -   | -   | -   |             |
| - sporadic falling of burning parts                              | yes/no | no       | no  | no  | no  |             |
| - continuous falling of burning droplets                         | yes/no | no       | no  | no  | no  |             |
| Duration of burning on the sieve tray                            | s      | 75       | 255 | 305 | 161 |             |
| Residual range                                                   |        |          |     |     |     |             |
| 1                                                                | cm     | 69       | 68  | 68  | 69  | >0          |
| 2                                                                | cm     | 70       | 69  | 69  | 70  |             |
| 3                                                                | cm     | 69       | 68  | 70  | 69  |             |
| 4                                                                | cm     | 70       | 67  | 68  | 67  |             |
| Average value of the residual range                              | cm     | 70       | 68  | 69  | 69  | ≥15         |
| Maximum flue gas temperature                                     | °C     | 137      | 139 | 135 | 144 | ≤200        |
| Time                                                             | s      | 600      | 600 | 600 | 600 |             |
| Duration of burning after end of test                            | s      | 0        | 0   | 0   | 0   |             |
| Maximum light attenuation                                        | %      | 1,4      | 1,5 | 2,8 | 1,7 |             |
| Integrated smoke obscuration                                     | min• % | 2        | 1   | 2   | 2   | ≤400        |
| Impairment of the burner flames by falling particles or droplets | yes/no | yes      | yes | yes | yes |             |
| Time of the appearance of falls for the burner                   | s      | 544      | 501 | 558 | 577 |             |
| Premature end of test                                            | yes/no | no       | no  | no  | no  |             |
| Time                                                             | s      | -        | -   | -   | -   |             |

**Remark 1:** Because of the residual length of > 45 cm in one test, the number of tests was reduced, according to Clause 6.2 b) DIN 4102-16:2021-01.

**Remark 2:** According to DIN 4102-16: 2021-01, Clause 5.2. Color various were selected in black (specimens 1 and 2 - Dark Colour: Craven - Batch: 587977), light grey (specimen 3 - Light Colour: Redoubt - Batch: 582350) and red (specimen 4 - Medium Colour: Redstone - Batch: 586326) colors). The difference between the means of measured residual lengths is no greater than 5 cm (respectively 70 cm, 68 cm, 69 cm and 69 cm) and the difference between the four mean flue gas temperatures shall be no greater than 10 K (respectively 137°C, 139°C, 135°C and 144°C). Total number of tests: four.

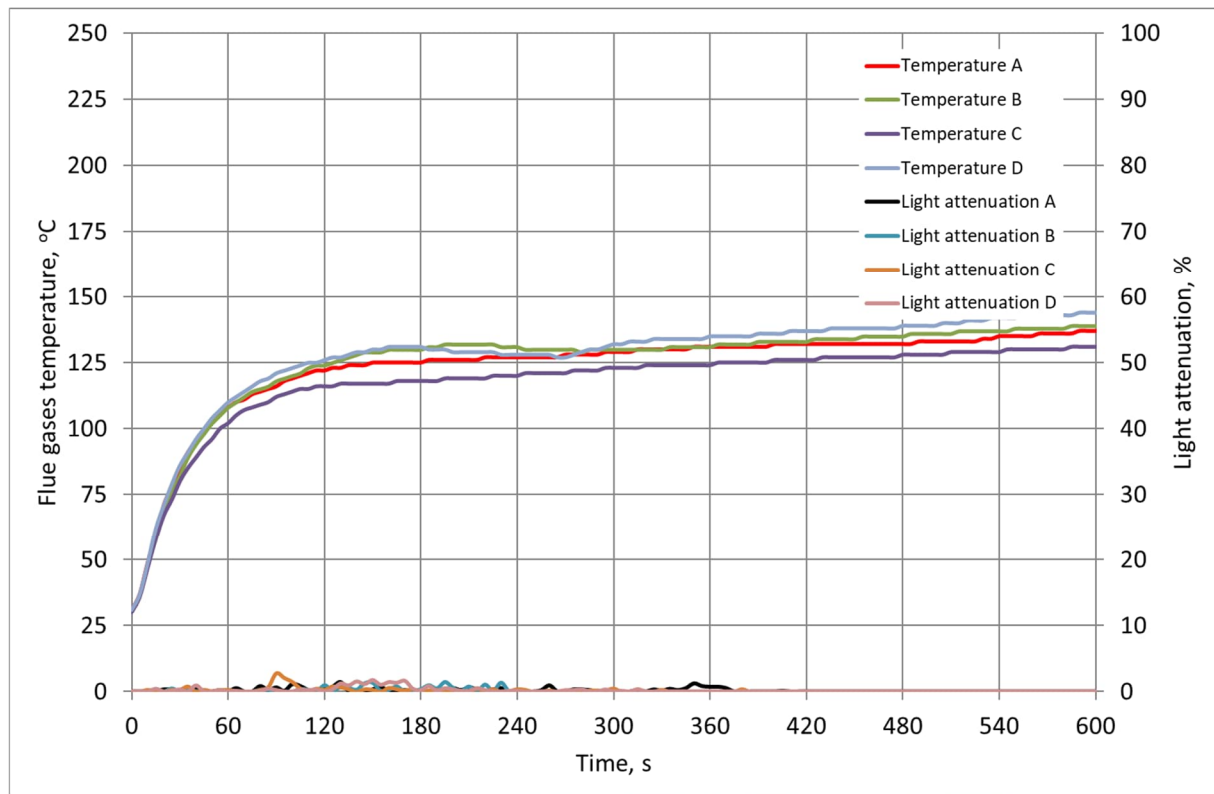


Figure 1. The relation of flue gases temperature and of the light attenuation in the time



Figure 2. Appearance of the sample 1 after the test - "Dark Colour: Craven - Batch: 587977" - cross direction



Figure 3. Appearance of the sample 2 after the test – “Dark Colour: Craven - Batch: 587977” – length direction



Figure 4. Appearance of the sample 3 after the test – “Light Colour: Redoubt - Batch: 582350”, length direction



Figure 5. Appearance of the sample 4 after the test – “Medium Colour: Redstone - Batch: 586326”, length direction

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

### 2.1. 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   | 1               | 2   | 3   | 4   | 5   |
| Minimum specimen thicknesses          | mm     | 1,1                         | 1,1 | 1,1 | 1,1 | 1,1 | 1,1             | 1,1 | 1,1 | 1,1 | 1,1 |
| Maximum specimen thicknesses          | mm     | 1,3                         | 1,3 | 1,3 | 1,3 | 1,3 | 1,3             | 1,3 | 1,3 | 1,3 | 1,3 |
| Ignition time                         | s      | 5                           | 2   | 2   | 1   | 2   | 3               | 2   | 1   | 1   | 1   |
| Extinction time                       | s      | 8                           | 9   | 12  | 15  | 6   | 12              | 6   | 15  | 8   | 5   |
| Burning time                          | s      | 3                           | 7   | 10  | 14  | 4   | 8               | 4   | 14  | 7   | 4   |
| Flame height 150 mm within 20 s       | YES/NO | NO                          | NO  | NO  | NO  | NO  | NO              | NO  | NO  | NO  | NO  |
| Time to reach 150 mm                  | s      | -                           | -   | -   | -   | -   | -               | -   | -   | -   | -   |
| Max. flame height                     | cm     | 1                           | 6   | 6   | 7   | 4   | 5               | 4   | 6   | 7   | 4   |
| Flaming particles or droplets         | YES/NO | NO                          | NO  | NO  | NO  | NO  | NO              | NO  | NO  | NO  | NO  |
| Ignition of paper                     | YES/NO | NO                          | NO  | NO  | NO  | NO  | NO              | NO  | NO  | NO  | NO  |
| Smoke development (visual impression) | -      | lack of smoke               |     |     |     |     |                 |     |     |     |     |



## 2.2. 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   | 1               | 2   | 3   | 4   | 5   |
| Minimum specimen thicknesses          | mm     | 1,1                         | 1,1 | 1,1 | 1,1 | 1,1 | 1,1             | 1,1 | 1,1 | 1,1 | 1,1 |
| Maximum specimen thicknesses          | mm     | 1,3                         | 1,3 | 1,3 | 1,3 | 1,3 | 1,3             | 1,3 | 1,3 | 1,3 | 1,3 |
| Ignition time                         | s      | 2                           | 3   | 3   | 3   | 4   | 3               | 2   | 4   | 3   | 4   |
| Extinction time                       | s      | 8                           | 11  | 14  | 10  | 13  | 11              | 10  | -   | 13  | 9   |
| Burning time                          | s      | 6                           | 8   | 11  | 7   | 9   | 8               | 8   | -   | 10  | 5   |
| Flame height 150 mm within 20 s       | YES/NO | NO                          | NO  | NO  | NO  | NO  | NO              | NO  | NO  | NO  | NO  |
| Time to reach 150 mm                  | s      | -                           | -   | -   | -   | -   | -               | -   | -   | -   | -   |
| Max. flame height                     | cm     | 4                           | 4   | 5   | 7   | 5   | 7               | 5   | 10  | 7   | 5   |
| Flaming particles or droplets         | YES/NO | NO                          | NO  | NO  | NO  | NO  | NO              | NO  | NO  | NO  | NO  |
| Ignition of paper                     | YES/NO | NO                          | NO  | NO  | NO  | NO  | NO              | NO  | NO  | NO  | NO  |
| Smoke development (visual impression) | -      | lack of smoke               |     |     |     |     |                 |     |     |     |     |

**Remarks:** none.



Figure 4. Appearance of the sample 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:** 23.04.2026

**Sampling:** Sponsor took and delivered samples.

**Description of the test material:** Sponsor delivered one piece of light fabric “Redoubt Batch: 582350 ” with dimensions of 5640x1430 mm, one piece of red fabric “Redstone Batch: 586326” with dimensions of 5440x1430 mm, and one piece of black fabric “Craven Batch: 587977” with dimensions of 5480x1470 mm. Each with a thickness of 1,1-1,3 mm and a weight per unit area of  $230 \pm 20$  g/m<sup>2</sup>. Laboratory prepared samples for the tests.

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

#### 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.

#### Operators:

  
lic. Krzysztof Fidryś



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#### Authorised by:

  
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Date and place of test - 08.05.2026 and 11.05.2026, Police

