



# Confidential Report

**Our Ref: 23/59388I1/02/22**





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Date: 1 March 2022

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**Client:**

**Kvadrat A/S**

Lundbergsvej 10  
8400 Ebeltoft  
Denmark

**Job Title:**

Fire Test on One Fabric Sample

**Clients Order Ref:**

0362415

**Date of Receipt:**

17 February 2022

**Date Test Started:**

1 March 2022

**Description of Sample:**

One sample of fabric, which was referenced by the client as;  
Steelcut 2 0190

**Work Requested:**

We were asked to test the received sample to the following standard:  
BS EN 1021:Parts 1 & 2:2014 – Ignitability of Upholstered Furniture

- \* subcontracted test, UKAS accredited
- \*\* subcontracted test, EN ISO/IEC 17025 accredited
- \*\*\* not UKAS accredited



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Note: This report relates only to the samples submitted and as described in the report.

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Client: Kvadrat A/S

## FIRE TEST ACCORDING TO BS EN 1021-1:2014

### Assessment of the ignitability of upholstered furniture. Part I. Ignition Source 0: Smouldering cigarette

#### Pre-Treatment

The material received no pre-treatment as the fabric is stated not to be FR treated.

#### Conditioning

The sample was conditioned for at least 16 hours at a temperature of  $23\pm 2^{\circ}\text{C}$  and relative humidity of  $50\pm 5\%$ .

The sample was tested in a room of volume  $20\text{m}^3$  and  $17^{\circ}\text{C}$ .

#### Procedure

The test was carried out in accordance with BS EN 1021-1:2014. The sponsor sampled the material and the specimens were cut from the sample received to the dimensions set out in the standard.

The sample was tested over non-fire retardant polyurethane foam with a density of approximately  $20\text{-}22\text{kg/m}^3$ .

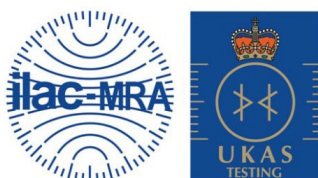
Tests were made using ignition source 0.

#### Requirements

The specimens shall not:-

#### Smouldering Criteria

- a) display escalating combustion requiring active extinction.
- b) smoulder or burn until it is essentially consumed within the test duration.
- c) smoulder or burn to the extremities of the specimen, or through the full thickness, within the duration of the test.
- d) smoulder for more than one hour.
- e) on final examination, show evidence of progressive smouldering.



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**Requirements (continued)**

Flaming Criteria

- a) show evidence of flaming initiated by a smouldering source.

**Results**

|   | <b>Specimen No.</b> |          |                      |
|---|---------------------|----------|----------------------|
| <b>Smouldering criteria</b>                               | <b>1</b>            | <b>2</b> | <b>3<sup>1</sup></b> |
| Unsafe escalating combustion                              | No                  | No       | ---                  |
| Testing assembly consumed                                 | No                  | No       | ---                  |
| Smoulders to extremities/full thickness                   | No                  | No       | ---                  |
| Smoulders more than 1 hour                                | No                  | No       | ---                  |
| In final examination, presence of progressive smouldering | No                  | No       | ---                  |

| <b>Flaming criteria</b>                                    | <b>1</b>  | <b>2</b>  | <b>3<sup>1</sup></b> |
|--|-----------|-----------|----------------------|
| Occurrence of flames                                       | No        | No        | ---                  |
| <b>Specimen Result</b><br>Ignition (I) / Non Ignition (NI) | <b>NI</b> | <b>NI</b> | ---                  |

Any “Yes” in smouldering or flaming criteria means Ignition

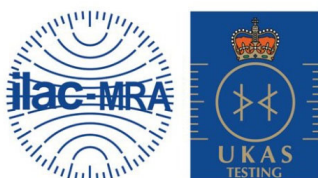
**Cigarette Test Result**      **PASS**

**Note**

The test results relate only to the ignitability of the combination of materials under the particular conditions of test; they are not intended as a means of assessing the full potential fire hazard of the materials in use.

**Comments**

An NI designation indicates that the sample meets the performance requirements of BS EN 1021-1.





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Client: **Kvadrat A/S**

## **FIRE TESTS ACCORDING TO BS EN 1021-2:2014**

### **Assessment of the ignitability of upholstered furniture. Part 2. Ignition Source 1: Match flame equivalent.**

#### **Pre-Treatment**

The material received no pre-treatment as the fabric is stated not to be FR treated.

#### **Conditioning**

The sample was conditioned for at least 16 hours at a temperature of  $23\pm 2^{\circ}\text{C}$  and relative humidity of  $50\pm 5\%$ .

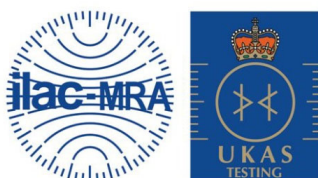
The sample was tested in a room of volume  $20\text{m}^3$  and  $17^{\circ}\text{C}$ .

#### **Procedure**

The test was carried out in accordance with BS EN 1021-2:2014. The sponsor sampled the material and the specimens were cut from the sample received to the dimensions set out in the standard.

The sample was tested over non-fire retardant polyurethane foam with a density of approximately  $20\text{-}22\text{kg/m}^3$ .

Tests were made using ignition source 1.



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## Requirements

The specimens shall not:-

### Smouldering Criteria

- a) display escalating combustion requiring active extinction.
- b) smoulders until it is essentially consumed within the test duration.
- c) smoulder to the extremities of the specimen, or through the full thickness, within the duration of the test.
- d) smoulder for more than one hour.
- e) show evidence of charring, other than discolouration, for more than 100mm in any direction apart from the nearest part of the original position of the source.

### Flaming Criteria

- a) display escalating combustion requiring active extinction.
- b) burns until it is essentially consumed within the test duration.
- c) burns to the extremities of the specimen, or through the full thickness, within the duration of the test.
- d) exhibit any flaming for more than 120 seconds after removal of the burner tube.



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**Results**

| Smouldering criteria                                      | Specimen No. |    |                |
|---|--------------|----|----------------|
|   | 1            | 2  | 3 <sup>1</sup> |
| Unsafe escalating combustion                              | No           | No | ---            |
| Testing assembly consumed                                 | No           | No | ---            |
| Smoulders to extremities/full thickness                   | No           | No | ---            |
| Smoulders more than 1 hour                                | No           | No | ---            |
| In final examination, presence of progressive smouldering | No           | No | ---            |

| Flaming criteria   | 1                            | 2         | 3 <sup>1</sup> |
|--|------------------------------|-----------|----------------|
|  | Unsafe escalating combustion | No        | No             |
| Testing assembly consumed                                  | No                           | No        | ---            |
| Flames to extremities/full thickness                       | No                           | No        | ---            |
| Flames longer than 120 seconds                             | No                           | No        | ---            |
| <b>Specimen Result</b><br>Ignition (I) / Non Ignition (NI) | <b>NI</b>                    | <b>NI</b> | ---            |

Any "Yes" in smouldering or flaming criteria means Ignition

**Match Test Result** **PASS**

**Note**

The test results relate only to the ignitability of the combination of materials under the particular conditions of test; they are not intended as a means of assessing the full potential fire hazard of the materials in use.

**Comment**

An NI designation indicates that the sample meets the performance requirements of BS EN 1021-2.





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An estimation of uncertainty of measurement has been taken into account when making a judgment to any pass/fail criteria. Under our Policy we have used a non-binary decision rule.

See our Decision rules Policy (<http://www.bttg.co.uk/decision-rules-policy>) for further information.

## Uncertainty Budget

The overall uncertainty budget for both BS EN 1021: Part 1 and 2:2014 is as follows:-

Timings:  $\pm 2$  seconds.

Reported by:.....  
B Bland  
Technical Customer Service Officer

Countersigned By:.....  
P Doherty  
Manager

Enquiries concerning this report should be addressed to Customer Services.



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