



# Confidential Report

Our Ref: 23/59922C/07/22





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Date: 13 July 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:**

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**Date of Receipt:**

5 July 2022

**Date Test Started:**

12 July 2022

**Description of Sample:**

One sample of fabric, which was referenced by the client as;  
Aaren, stated to be 85% new wool worsted, 10% viscose, 5% nylon

**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

Note: This report relates only to the items tested.



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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 materials for testing to Source 0 and 1 were conditioned for a minimum of 24 hours and tested in the environments specified in Clause 7 of BS EN 1021-1 & 2:2014.

The sample was tested in a room of volume 25m<sup>3</sup> and 23°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 20-22kg/m<sup>3</sup>.

Tests were made using ignition source 0.

#### **Requirements**

The specimens shall not:-

#### Smouldering Criteria

- display escalating combustion requiring active extinction.
- smoulder or burn until it is essentially consumed within the test duration.
- smoulder or burn to the extremities of the specimen, or through the full thickness, within the duration of the test.
- smoulder for more than one hour.
- 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

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>
	Occurrence of flames	No	No
<b>Specimen Result</b> 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 24 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  $25\text{m}^3$  and  $23^{\circ}\text{C}$ .

#### **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> 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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Where required to make a judgement to any pass/fail criteria an estimation of uncertainty of measurement has been taken into account. Under our Policy we have used a non-binary decision rule.

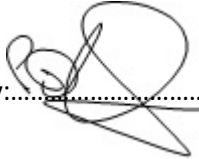
See our decision rules Policy (<http://www.bttg.co.uk/decision-rules-policy>) for further information.

## 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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