



# Confidential Report

**Our Ref: 54566-1-2**



Notified Body  
for PPE Directive,  
Construction Products Regulation  
& Marine Equipment Directive  
I.D. No. 0338 & 0339



Wira House, West Park Ring Road, Leeds, LS16 6QL, UK.  
Telephone: +44 (0) 113 259 1999  
Email: [info@bttg.co.uk](mailto:info@bttg.co.uk)  
Website: [www.bttg.co.uk](http://www.bttg.co.uk)

Date: 29 January 2018

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Client: Kvadrat A/S  
Lundbergsvej 10  
8400 Ebeltoft  
Denmark

Job Title: Fire Test on One Sample of Fabric

Client's Order No: -

Date of Receipt: 18 January 2018

Description of Sample(s): Twill Weave, stated to be 90% new wool, 10% nylon, worsted

Work Requested: We were asked to make the following test(s):  
  
BS EN 1021-1:2014 and BS EN 1021-2 2014

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



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**Client: Kvadrat A/S**

## **FIRE TESTS ACCORDING TO BS EN 1021-1:2014**

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

**Date of Test:** 26 January 2018

#### **Pre-Treatment**

The sample was water-soaked and dried in accordance with BS EN 1021 Part 1:Annex D.

#### **Conditioning**

After drying 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  $25\text{m}^3$  and  $23^{\circ}\text{C}$ .

#### **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 combustion modified polyurethane foam with a density of approximately  $36\text{ kg/m}^3$ .

Tests were made using ignition source 0.



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### 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.

#### Flaming Criteria

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

### Results

	Cigarette			Comments
	1	2	3 <sup>1</sup>	
<b>Smouldering Criteria (Yes/No)</b>				
Unsafe escalating combustion	No	No	--	
Test assembly consumed	No	No	--	
Smoulders to extremities	No	No	--	
Smoulders through thickness	No	No	--	
Smoulders more than 1 hour	No	No	--	
In final examination, presence of progressive smouldering	No	No	--	
<b>Ignitability Performance (Yes/No)</b>				
Occurrence of flames	No	No	--	
Ignition / Non Ignition ( I/NI )	NI	NI	--	

<sup>1</sup> Results for cigarette 3, only if applicable.



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#### 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

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

#### 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 sample was water-soaked and dried in accordance with BS EN 1021 Part 2:Annex D.

#### Conditioning

The sample was water-soaked and dried in accordance with Annex D of this standard. After drying 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  $25\text{m}^3$  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 combustion modified polyurethane foam with a density of approximately  $36\text{ kg/m}^3$ .



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Tests were made using ignition source 1.

### 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**

	Match Flame Equivalent		Comments
	1	2	
<b>Smouldering Criteria (Yes/No)</b>			
Unsafe escalating combustion	No	No	
Test assembly consumed	No	No	
Smoulders to extremities	No	No	
Smoulders through thickness	No	No	
Smoulders more than 1 hour	No	No	
In final examination, presence of progressive smouldering	No	No	
<b>Ignitability Performance (Yes/No)</b>			
Unsafe escalating combustion	No	No	
Test assembly consumed	No	No	
Flames to extremities	No	No	
Flames through thickness	No	No	
Flames longer than 120 seconds	No	No	
Ignition / Non Ignition ( I/NI )	NI	NI	

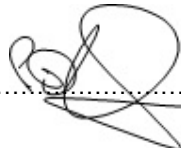
**Note**

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**

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

Reported by:   
J Coleman  
Fire Technician

Countersigned By:   
P Doherty  
Operational Head

Enquiries concerning this report should be addressed to Customer Services.





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## Uncertainty Budget - Annex

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

Measurements:  $\pm 2$  mm  
Timings:  $\pm 2$  seconds



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