



# Confidential Report

**Our Ref: 54681-1-2**



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



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Date: 6 March 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: 16 February 2018

Description of Sample(s): Re-wool, stated to be 45% recycled wool, 45% new wool, 10% nylon

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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## **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:** 28 February 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  $16^{\circ}\text{C}$ .

#### **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.



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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  $16^{\circ}\text{C}$ .

#### 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  $20\text{-}22\text{ kg/m}^3$ .





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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	

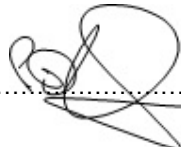
**Note**

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**

An 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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