



**FIRE
TECHNOLOGY
SERVICES**

Confidential Report

Our Ref: 27/03686J/10/15

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

**Fire Technology Services
A division of BTTG T & C Ltd
Wira House, West Park Ring Road,
Leeds, LS16 6QL**

Tel No: +44 (0)113 2591999



1066



**FIRE
TECHNOLOGY
SERVICES**

BTTG Testing & Certification Ltd.
Wira House
West Park Ring Road
Leeds, LS16 6QL
England

Tel: +44 (0)113 259 1999
Web:<http://www.bttg.co.uk>
Email:CSLeeds@bttg.co.uk

10 November 2015

Page 2 of 9

Our Ref:
Your Ref:

Kvadrat A/S

10 November 2015

Our Ref: 27/03686J/10/15
Your Ref:

Page 1 of 9

Client: Kvadrat A/S
Lundbergsvej 10
8400 Ebeltoft
Denmark

Job Title: **Fire Test on One Sample of Material**

Clients Order Ref: ---

Date of Receipt: 08 October 2015

Description of Sample: One sample of material, referenced: **Fuse by Raf Simons, 65% new wool, 25% cotton, 8% viscose, 4% nylon.**

Work Requested: Fire Technology Services were requested to carry out a fire test on the sample supplied to BS EN 1021:Parts 1 & 2:2014.





10 November 2015

Page 3 of 9

Our Ref:
Your Ref:

Kvadrat A/S

FIRE TESTS ACCORDING TO BS EN 1021-1:2014

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

Date of Test: 06/11/2015

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 25m^3 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 specimens were mounted over fillings of standard non-FR polyurethane foam of density about $22\text{Kg}/\text{m}^3$.

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.

Flaming Criteria

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





10 November 2015

Page 4 of 9

Our Ref:
Your Ref:

Kvadrat A/S

Results

| | Cigarette | | | Comments |
|---|-----------|----|----------------|----------|
| | 1 | 2 | 3 ¹ | |
| Smouldering Criteria (Yes/No) | | | | |
| 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 | -- | |
| Ignitability Performance (Yes/No) | | | | |
| Occurrence of flames | No | No | -- | |
| Ignition / Non Ignition (I/NI) | NI | NI | -- | |

¹ Results for cigarette 3, only if applicable.

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
TECHNOLOGY
SERVICES**

BTTG Testing & Certification Ltd.
Wira House
West Park Ring Road
Leeds, LS16 6QL
England

Tel: +44 (0)113 259 1999
Web: <http://www.bttg.co.uk>
Email: CSLeeds@bttg.co.uk

10 November 2015

Page 5 of 9

Our Ref:
Your Ref:

Kvadrat A/S

FIRE TESTS ACCORDING TO BS EN 1021-2:2014
Assessment of the ignitability of upholstered furniture. Part 2. Ignition Source : Match flame equivalent.

Date of Test: 06/11/2015

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 25m^3 and 23°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 specimens were mounted over fillings of standard non-FR polyurethane foam of density about $22\text{Kg}/\text{m}^3$.

Tests were made using ignition source 1.





FIRE TECHNOLOGY SERVICES

BTTG Testing & Certification Ltd.
Wira House
West Park Ring Road
Leeds, LS16 6QL
England

Tel: +44 (0)113 259 1999
Web: <http://www.bttg.co.uk>
Email: CSLeeds@bttg.co.uk

10 November 2015

Page 6 of 9

Our Ref:
Your Ref:

Kvadrat A/S

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.





10 November 2015

Page 7 of 9

Our Ref:
Your Ref:

Kvadrat A/S

Results

| | Match Flame Equivalent | | Comments |
|---|------------------------|----|----------|
| | 1 | 2 | |
| Smouldering Criteria (Yes/No) | | | |
| 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 | |
| Ignitability Performance (Yes/No) | | | |
| 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.





**FIRE
TECHNOLOGY
SERVICES**

BTTG Testing & Certification Ltd.
Wira House
West Park Ring Road
Leeds, LS16 6QL
England

Tel: +44 (0)113 259 1999
Web: <http://www.bttg.co.uk>
Email: CSLeeds@bttg.co.uk

10 November 2015

Page 8 of 9

Our Ref:
Your Ref:

Kvadrat A/S

Comments

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

Uncertainty of measurement has not been taken into account when presenting the test result. The relevant uncertainty value is included as an annex which forms an integral part of the report.

Reported by:..... *A. Shute* A Shute, Fire Technician

Countersigned by:..... *M. NUNNEY* P Doherty, Operational Head
PP M. NUNNEY

Enquiries concerning this report should be addressed to Customer Services.





FIRE
TECHNOLOGY
SERVICES

BTTG Testing & Certification Ltd.
Wira House
West Park Ring Road
Leeds, LS16 6QL
England

Tel: +44 (0)113 259 1999
Web: <http://www.bttg.co.uk>
Email: CSLeeds@bttg.co.uk

10 November 2015

Page 9 of 9

Our Ref:
Your Ref:

Kvadrat A/S

Uncertainty Budget - Annex

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

Timings: ± 2 seconds.





FIRE
TECHNOLOGY
SERVICES

BTTG Testing & Certification Ltd.
Wira House
West Park Ring Road
Leeds, LS16 6QL
England

Tel: +44 (0)113 259 1999
Web: <http://www.bttg.co.uk>
Email: CSLeeds@bttg.co.uk

10 November 2015

Page 10 of 9

Our Ref:
Your Ref:

Kvadrat A/S

Uncertainty Budget - Annex

The overall uncertainty budget IMO FTP Code 2010:Part 8 is as follows:-

Measurements: $\pm 1\text{mm}$
Timings: ± 2 seconds

