

Our Ref: SW/PN/JD

8 January 2019

Report 335217

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Contact: Katie Hamblett


DATE RECEIVED	:	02 JANUARY 2019
REPUTED FIBRE CONTENT	:	NOT GIVEN
FABRIC DESCRIPTION	:	WOVEN
COLOUR/DESIGN	:	BRODIE
END USE	:	UPHOLSTERY
ORDER NUMBER	:	CONTRACTS 133 UK TESTING

REQUEST: BS7176:2007 + A1:2011 Specification for resistance to ignition of upholstered furniture for non-domestic seating by testing composites – Table 1: Medium Hazard Use

COMMENTS: Meets the flammability performance requirements of BS7176:2007 + A1:2011 Table 1 for Medium Hazard Use



S. WISEMAN
LABORATORY DIRECTOR



P. NEESAM
HEAD OF FLAMMABILITY

This report shall not be reproduced except in full without written approval of HSTTS. In all circumstances results of tests are implied as referring only to the sample supplied and should not be construed or interpreted on any other basis. The comments given in the report are for guidance only and are not a part of the results. Where specified in a test method preconditioning in accordance with ISO 139 is not carried out as samples are exposed to the conditioning atmosphere specified within ISO 139 for a minimum of 16 hours prior to test.



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BS 7176:2007 + A1:2011 Specification for resistance to ignition of upholstered furniture for non-domestic seating by testing composites

BS7176:2007 +A1:2011 specifies flammability performance requirements for composites comprising cover fabric and filling material(s) and includes additional requirements in clause 4.1.2 relating to the flammability behaviour of the filling materials used. The filling materials which will be used in the final article are not always known to the fabric supplier and therefore nominal filling materials are used for the purpose of testing which may not necessarily represent the final composite. All filling materials supplied by HSTTS for the purpose of testing cover fabrics comply with the relevant requirements of clause 4.1.2.

Clause 4.1.1 requires that testing is carried out in accordance with the frequency stated in clause 5. No information was provided by the client regarding the lot size or frequency of testing.

According to Table 1, composites for Medium Hazard end-use shall meet the requirements of BSEN 1021-1:2006 (cigarette ignition source), BSEN 1021-2:2006 (match-equivalent flame) and BS 5852:2006 Clause 11 (ignition source crib 5).

Pre-treatment:

In accordance with clause 4.2, all fabrics which have been chemically treated to reduce their ignitability are subjected to the water soaking and drying procedures specified in BS 5852:2006 Annex E prior to being conditioned. Such pre-treatment is not necessary for materials which are formulated to be or are inherently flame-retarded.

Pre-treatment applied: Water soaking (BS5852:2006 Annex E)

Conditioning

After any pre-treatment given but prior to testing, the test specimens of Brodie were subjected to conditioning for at least 72 hours in ambient indoor conditions followed by a minimum of 24 hours at a temperature of (23± 2°C) and relative humidity of (50±5%).

Test results

The following 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. They also only relate to the materials tested. They do not guarantee to represent the performance of production materials.

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Filling material used: Combustion modified high resilience foam of approximately 36 kg/m³ was used.

- (i) BS EN 1021-1:2006 Furniture - Assessment of the ignitability of upholstered furniture – Part I.
Ignition Source: Smouldering cigarette.

<u>Test</u>	<u>Observations</u>	<u>Outcome</u>
1	No flaming or progressive smouldering observed	Pass
2	No flaming or progressive smouldering observed	Pass

- (ii) BS EN 1021-2:2006 Furniture - Assessment of the ignitability of upholstered furniture – Part 2.
Ignition Source Match flame equivalent.

Duration of flame application: 15 seconds

<u>Test</u>	<u>Observations</u>	<u>Outcome</u>
1	Duration of flaming: 1 secs No progressive smouldering observed	Pass
2	Duration of flaming: 1 secs No progressive smouldering observed	Pass
3	Duration of flaming: 1 secs No progressive smouldering observed	Pass

- (iii) BS 5852:2006. Methods of Test for the Assessment of the ignitability of upholstered seating by smouldering and flaming ignition sources.

Tests were made using ignition source 5.

The following test results relate only to the ignitability of the combination of upholstery composites (BS5852: 2006, Clause 11) under the particular conditions of test stated; they are not intended as a means of assessing the full potential fire hazard of the materials in use. They also only relate to the materials tested. They do not guarantee to represent the performance of production materials.

<u>Test</u>	<u>Observations</u>	<u>Outcome</u>
1	No progressive smouldering observed Duration of flaming: 3.03 mins/secs	Pass
2	No progressive smouldering observed Duration of flaming: 2.53 mins/secs	Pass

Comments

When tested as described above the sample is assessed as meeting the flammability performance requirements of BS7176:2007 + A1:2011 Table 1 for Medium Hazard end-uses.