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Ignitability of upholstered furniture according to BS 5852:Part 1 (1 appendix)

Product

According to the client:
Fabric called "Boltaflex Colorways". The fabric consisted of PVC (86 %) and Rayonne (14 %) and had a nominal thickness of 1.3 mm and a nominal area weight of 750 g/m². The fabric was tested in combination with non flame retardant standard polyether foam with nominal density 21 kg/m³.

Manufacturer

Fabric: Omnova International.

Polyether foam: Recticel AB.

Purpose of test

Basis for technical fire classification in accordance with the "1988 No. 1324 Consumer Protection The Furniture and Furnishings (Fire) (Safety) Regulations 1988", Schedule 5, Part 1 (match flame equivalent test of fabric).

Sampling

The fabric was delivered by the manufacturer. It is not known to SP Fire Technology if the product received is representative of the mean production characteristics.

The fabric was received on March 4, 2008 at SP Fire Technology.

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Test results

The upholstery combination was tested with match flame equivalent (source 1) as ignition source.

The ignition source was applied in a position along the junction between seat and back. Special care was taken to note any progressive smouldering and/or flaming combustion in the combination.

The test results are given in appendix 1.

The test results relate only to the ignitability of the combination of upholstery composites under the particular conditions of the test; they are not intended as a means of assessing the potential fire hazard of the materials or products in use.

Criteria

1988 No. 1324 Consumer Protection The Furniture and Furnishings (Fire) (Safety) Regulations 1988”, Schedule 5, Part 1 (based on BS 5852:Part 1:1979 – match flame test)


Clause 9.2 and 9.3 in BS 5852:Part 1:1979 describing progressive smouldering failure and flaming failure.

Assessment

The tested furniture upholstery combination, consisting of fabric called “Boltaflex Colorways”, together with standard polyether foam with nominal density 21 kg/m³, meets the technical fire requirements according to BS 5852:Part 1:1979 (match flame equivalent).

The tested furniture upholstery combination, consisting of fabric called “Boltaflex Colorways”, together with standard polyether foam with nominal density 21 kg/m³, thereby also complies with “1988 No. 1324 Consumer Protection The Furniture and Furnishings (Fire) (Safety) Regulations 1988, Schedule 5, part 1.

SP Technical Research Institute of Sweden Fire Technology - Fire Dynamics



Per Thureson
Technical Manager



Marina C Andersson
Technical Officer

Appendix

1 Test results

Appendix 1

Test results – Schedule 5, part 1 (BS 5852:Part 1:1979)

Product

According to the client:

Fabric called “Boltaflex Colorways”. The fabric consisted of PVC (86 %) and Rayonne (14 %) and had a nominal thickness of 1.3 mm and a nominal area weight of 750 g/m². The fabric was tested in combination with non flame retardant standard polyether foam with nominal density 21 kg/m³.

Observations, BS 5852:Part 1, match flame equivalent (ignition source 1)

Test no	1	2
The ignition source was applied in a position along the junction between seat and back, min:s	00:00	00:00
Cover ignited, min:s	00:08	00:07
Filling ignited, min:s	-*	-*
The ignition source was removed, min:s	00:20	00:20
Flames in the cover died out, min:s	-	-
Flames in the filling died out, min:s	-	-
The glow self-extinguished, min:s	-	-
The flaming was extinguished, min:s	02:50	02:50
The test was finished, min:s	60:00	60:00

* Ignition of the materials was not observed.

Observations after the fire test, BS 5852:Part 1

No progressive smouldering and/or flaming occurred within the 60 minute test time.

Note

The cover material has not been subjected to the water soaking and drying procedure described in clause 4.2 to 4.5 of BS 5651 before testing.

Measured data

Thickness, fabric 1.2 mm.
Area weight, fabric 760 - 770 g/m².

Conditioning

Temperature (23 ± 2) °C.
Relative humidity (50 ± 5) %.

Date of test

April 8, 2008.