

Elmo-Calf AB
512 81 SVENLJUNGA

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Ignitability of upholstered seating according to BS 5852 (1990) (2 enclosures)

Products

Upholstered seats consisting of :

Cover: Lightly pigmented, chrome tanned, leather made from Scandinavian cattle called "Elmoline", nominal thickness 1.1 - 1.3 mm, and "Elmotech", nominal thickness 1.3 - 1.5 mm.

Foam: Moulded High Resilience polyurethane foam with enhanced fire retardant performance called "Transprotect HM01" having a nominal density of 80 kg/m³.

Manufacturer

Cover: Elmo-Calf AB, Svenljunga, Sweden

Purpose of test

Basis for technical fire classification.

Sampling

The samples were delivered by the client. It is not known to SP, Fire Technology if the products received are representative of the mean production characteristics.

The samples were received July 7 and 9, 1999 at SP, Fire Technology.

Test results

The upholstered seats were tested according to BS 5852 (1990), Section 4: "Methods of test for the ignitability of upholstery composites", with wood crib 7 as ignition source.

The ignition source was applied in the centre of the junction between seat and back.

The test results for combination of "Elmoline" and "Transprotect HM01" are given in enclosure 1.

The test results for combination of "Elmotech" and "Transprotect HM01" are given in enclosure 2.

The test results relate only to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.


Criteria

"Criteria of ignition", described in BS 5852 (1990), Section 4, paragraph 11.2, regarding "Progressive smouldering ignition" and paragraph 11.3, regarding "Flaming ignition".

Assessment

The tested upholstered combinations of foam and leather cover meet the technical fire requirements for upholstered seating mentioned above when tested according to BS 5852 (1990) with wood crib 7 as ignition source (section 4, NI/7).

SP Sveriges Provnings- och Forskningsinstitut Fire Technology, Materials Reaction to Fire



Per Thureson
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Enclosures

1 - 2 Test results



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Enclosure 1

Test results - BS 5852 (1990), Section 4 Ignition source: Crib 7

Product

Upholstered seat consisting of :

Cover: Lightly pigmented, chrome tanned, leather made from Scandinavian cattle called "Elmoline", nominal thickness 1.1 - 1.3 mm.

Foam: Moulded High Resilience polyurethane foam with enhanced fire retardant performance called "Transprotect HM01" having a nominal density of 80 kg/m³.

Observations

Test no	1	2
The crib was ignited, min:s	00:00	00:00
Cover ignited, min:s	01:49	01:26
Cover opened up, min:s	02:48	02:17
Filling ignited, min:s	04:56*	04:48*
Flames in the cover died out, min:s	09:17	09:09
Flames in the filling died out, min:s	-	-
The glow extinguished, min:s	22:36	17:26
The test was finished, min:s	60:00	60:00

* A few small flames

Observations after the fire test

Test no	1		2	
Total charred length in:	Cover	Filling	Cover	Filling
Width, back, mm	262	262	380	380
Height, back, mm	400	400	400	400
Depth, back, mm	-	35	-	38
Width, seat, mm	250	250	228	228
Forward, seat, mm	175	175	208	208
Depth, seat, mm	-	70	-	70
Charred to full depth of back	No		No	
Charred to full depth of seat	No		No	



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Enclosure 1

Measured data

Area weight, cover, 610 - 650 g/m²

Thickness, foam, 74 - 77 mm

Density, foam, 77 - 80 kg/m³

Conditioning

Temperature 23 ± 2 °C.

Relative humidity (50 ± 5) %.

Date of test

September 9, 1999.



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Enclosure 2

Test results - BS 5852 (1990), Section 4 Ignition source: Crib 7

Product

Upholstered seat consisting of :

Cover: Lightly pigmented, chrome tanned, leather made from Scandinavian cattle called "Elmotech", nominal thickness 1.3 - 1.5 mm.

Foam: Moulded High Resilience polyurethane foam with enhanced fire retardant performance called "Transprotect HM01" having a nominal density of 80 kg/m³.

Observations

Test no	1	2
The crib was ignited, min:s	00:00	00:00
Cover ignited, min:s	01:33	01:26
Cover opened up, min:s	02:34	02:18
Filling ignited, min:s	05:02*	03:40*
Flames in the cover died out, min:s	07:56	09:46
Flames in the filling died out, min:s	-	-
The glow extinguished, min:s	10:56	12:36
The test was finished, min:s	60:00	60:00

* A few small flames

Observations after the fire test

Test no	1		2	
Total charred length in:	Cover	Filling	Cover	Filling
Width, back, mm	158	158	171	171
Height, back, mm	400	400	400	400
Depth, back, mm	-	33	-	31
Width, seat, mm	156	156	177	177
Forward, seat, mm	142	142	200	200
Depth, seat, mm	-	36	-	70
Charred to full depth of back	No		No	
Charred to full depth of seat	No		No	



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Enclosure 2

Measured data

Area weight, cover, 870 - 920 g/m²

Thickness, foam, 74 - 77 mm

Density, foam, 77 - 80 kg/m³

Conditioning

Temperature 23 ± 2 °C.

Relative humidity (50 ± 5) %.

Date of test

September 9, 1999.