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Elmo Leather AB
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Ignitability of upholstered furniture according to EN 1021-1:2006 and EN 1021-2:2006

(1 appendix)

Product

Silver coloured cover material called "Elmotreasure". Semi-Aniline leather with nominal thickness 1.1 - 1.3 mm. Lightly pigmented finish, chrome-free tanned leather from Scandinavian cattle hide. The cover was tested in combination with non flame retardant standard polyether foam with nominal density 21 kg/m³.

Manufacturer

Cover material: Elmo Leather AB, Svenljunga, Sweden.

Polyether foam: Recticel AB, Gislaved, Sweden.

Purpose of test

Basis for technical fire classification.

Sampling

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

The sample was received on May 16, 2008 at SP Fire Technology.

Test results

The upholstery combination was tested with cigarette (EN 1021-1) and match flame equivalent (EN 1021-2) as ignition sources.

The ignition sources were 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.

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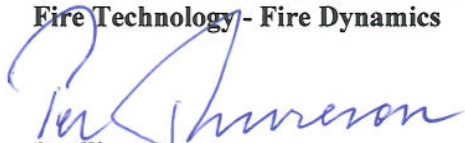
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Criteria


Section 3 in EN 1021-1, 2006 describing "Criteria of ignition" with regards to "Progressive smouldering ignition" (3.1) and "Flaming ignition" (3.2).

Assessment

The tested furniture upholstery combination, consisting of cover called "Elmotreasure", together with standard polyether foam with nominal density 21 kg/m^3 , meets the technical fire requirements according to EN 1021-1 and EN 1021-2.

**SP Technical Research Institute of Sweden
Fire Technology - Fire Dynamics**

Per Thureson
Technical Manager



Ida Larsson
Technical Officer

Appendix

1 Test results

Appendix 1

Test results – EN 1021-1:2006 and EN 1021-2:2006
Tested product

Silver coloured cover material called "Elmotreasure". Semi-Aniline leather with nominal thickness 1.1 - 1.3 mm. Lightly pigmented finish, chrome-free tanned leather from Scandinavian cattle hide. The cover was tested in combination with non flame retardant standard polyether foam with nominal density 21 kg/m³.

Observations during EN 1021-1, cigarette test
Table 1. Observations during the cigarette tests.

Test no	1	2
The cigarette was applied in a position along the junction between seat and back, min:s	00:00	00:00
Cover ignited, min:s	_*	_*
Filling ignited, min:s	_*	_*
The cigarette died out, min:s	33:45	34:53
Flames in the cover died out, min:s	-	-
Flames in the filling died out, min:s	-	-
The flames were extinguished, min:s	-	-
The test was finished, min:s	60:00	60:00

* Ignition of the materials was not observed.

Table 2. Test criteria and assessment, cigarette test.

	Test no	
	1	2
<i>"Smouldering criteria"</i>	Yes/No	
Unsafe escalating combustion (3.1 a)	No	No
Test assembly consumed (3.1 b)	No	No
Smoulders to extremities (3.1 c)	No	No
Smoulders through thickness (3.1 c)	No	No
Smoulders more than 1 h (3.1 d)	No	No
In final examination, presence of active smouldering (3.1 e)	No	No
<i>"Flaming criteria"</i>		
Occurrence of flames (3.2)	No	No

Appendix 1

Observations during EN 1021-2, match flame test

Table 3. Observations during the match flame tests.

Test no	1	2	3
The ignition source was applied in a position along the junction between seat and back, min:s	00:00	00:00	00:00
The ignition source was removed, min:s	00:15	00:15	00:15
Cover ignited, min:s	_*	_*	_*
Filling ignited, min:s	_*	_*	_*
Flames in the cover died out, min:s	-	-	-
Flames in the filling died out, min:s	-	-	-
The flames were extinguished, min:s	-	-	-
The test was finished, min:s	60:00	60:00	60:00

* Ignition of the materials was not observed.

Table 4. Test criteria and assessment, match flame test.

	Match flame equivalent		
	1	2	3
<i>"Smouldering criteria"</i>	Yes/No		
Unsafe escalating combustion (3.1 a)	No	No	No
Test assembly consumed (3.1 b)	No	No	No
Smoulders to extremities (3.1 c)	No	No	No
Smoulders through thickness (3.1 c)	No	No	No
Smoulders more than 1 h (3.1 d)	No	No	No
In the final examination, presence of active smouldering (3.1 e)	No	No	No
<i>"Flaming criteria"</i>			
Unsafe escalating combustion (3.2 a)	No	No	No
Test assembly consumed (3.2 b)	No	No	No
Flames to extremities (3.2 c)	No	No	No
Flames through thickness (3.1 c)	No	No	No
Flames longer than 120 s (3.2 d)	No	No	No

Appendix 1

Pre-treatment

The cover material has not been subjected to the water soaking and drying procedure described in Annex D before testing.

Measure data of test sample

Thickness, cover 1.2 – 1.5 mm.
Area weight, cover 610 - 710 g/m².

Conditioning

24 h at temperature 23 ± 2 °C and relative humidity (50 ± 5) %.

Date of test

June 10, 2008.