REPORT

Issued by an Accredited Testing Laboratory

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O100745-1372113

Kvadrat A/S
Lundbergsvej 10
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Danmark

Ignitability of upholstered furniture according to EN 1021-1 and EN 1021-2

(1 appendix)

Introduction

RISE has by request of Kvadrat A/S performed a fire test according to EN 1021-1 and EN 1021-2. The purpose of the test is to form a basis for technical fire classification.

Product

Fabric called “Technicolour”. According to the client the product consists of:

Material content	Manufacturer	Thickness	Nominal data
100% British wool, worsted	Kvadrat A/S	0.6 mm	310 g/m^2

Sampling

The sample was delivered by the manufacturer. It is not known to RISE, Fire and Safety if the product received is representative of the mean production characteristics.

The sample was received on June 22, 2026 at RISE, Fire and Safety.

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.

No progressive smouldering and/or flaming occurred within the 60 minute test time (non-ignition). 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

Section 3 in EN 1021-1:2014 and EN 1021-2:2014 describing ”Criteria of ignition” with regards to ”Progressive smouldering ignition” (3.1) and ”Flaming ignition” (3.2).

Assessment

The tested fabric called “Technicolour” meets the technical fire requirements according to EN 1021-1 and EN 1021-2.

Note

The fabric “Technicolour” was tested in combination with a non-flame retardant flexible polyurethane foam with a density of 20-22 kg/m^3.

RISE Research Institutes of Sweden AB
Fire and safety - Fire dynamics

Performed by

Henrik Fredriksson

Examined by

Anna Bergstrand

Appendix

1. Test results – EN 1021-1:2014 and EN 1021-2:2014

Appendix 1

Test results - EN 1021-1:2014 and EN 1021-2:2014

Product

Fabric called “Technicolour”. According to the client the product consists of:

Material content	Manufacturer	Thickness	Nominal data
100% British wool, worsted	Kvadrat A/S	0.6 mm	310 g/m^2

Test set-up

The fabric “Technicolour” was tested in combination with a non-flame retardant flexible polyurethane foam with a density of 20-22 kg/m^3.

According to standard, the foam filling was tested with thickness 75 mm.

Observations, EN 1021-1, ignition source cigarette

Table 1. Observations during the cigarette tests.

Test no	1	2	3
The cigarette was applied in a position along the junction between seat and back, min:s	00:00	00:00	00:00
Cover ignited, min:s	-*	-*	-*
Filling ignited, min:s	-*	-*	-*
The cigarette died out, min:s	~16:00**	25:59	~19:20**
The test was finished, min:s	60:00	60:00	60:00

* Ignition/Flaming ignition of the materials was not observed.
** The cigarette died out before smouldering its full length.

Table 2. Test criteria and assessment, cigarette test.

	Test no		
	1	2	3
Smouldering criteria	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 final examination, presence of progressive smouldering (3.1 e)	No	No	No
Flaming criteria			
Occurrence of flames (3.2)	No	No	No

Appendix 1

Observations, EN 1021-2, ignition source small flame

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
Cover ignited, min:s	00:07	00:08	00:08
Filling ignited, min:s	-*	-*	-*
The ignition source was removed, min:s	00:15	00:15	00:15
Flames in the cover died out, min:s	00:16	00:17	00:15
The test was finished, min:s	60:00	60:00	60:00

* Ignition/Flaming ignition of the materials was not observed.

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

	Match flame equivalent		
	1	2	3
"Smouldering criteria"	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
"Flaming criteria"			
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

Measured data of tested product

Material	Thickness (mm)	Area weight (g/m^2)	Density (kg/m^3)
Cover fabric	-	310	-

Pre treatment

According to the client, the cover material has not been chemically treated to reduce ignitability. The cover material has therefore not been subjected to the water soaking and drying procedure described in Annex D before testing.

Conditioning

The tested product was conditioned for a minimum of 24 h at a temperature of (23 ± 2) °C and a relative humidity of (50 ± 5) %.

Date of test

July 1, 2026.

Verification

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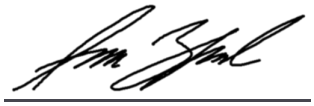

Signed 2026-07-01 15:14:18 CEST (+0200)