



## Confidential Report

Our Ref: 29/03447/09/24



Date: 03 October 2024

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**Client:** Kvadrat A/S

Lundbergsvej 10  
8400 Ebeltoft  
Denmark

**Job Title:** Various test on one sample of fabric

**Clients Order Ref:** --

**Date of Receipt:** 16 September 2024

**Description of Sample:** One sample of fabric, referenced; Hallingdal 65/126.

**Work Requested:** We were asked to make the following test(s):

EN ISO 12947-2  
BS EN ISO 12945-2

\* subcontracted test, UKAS accredited  
\*\* subcontracted test, EN ISO/IEC 17025 accredited  
\*\*\* not UKAS accredited



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Note: This report relates only to the items tested.

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Client: **Kvadrat A/S**

**Abrasion Resistance Test: BS EN 14465: 2003, Annex A, 12kPa pressure**

Date of test: 24/09/24

**Conditioning**

Unless otherwise specified the sample has been conditioned and tested, where appropriate, in the standard atmosphere for conditioning and testing textiles (BS EN ISO 139:2005 + A1:2011) of 65±4% r.h. and 20±2°C.

**Colour Change**

Colour change grade at the number of rubs shown. Colour change grades range from 5 (no change) to 1 (severe change).

No. rubs	Specimen 1	Specimen 2	Specimen 3	Specimen 4	Overall Result
3000	4-5	4-5	4-5	4-5	4-5

BS 2543: 2004 – Upholstery fabrics for end use applications-Classification - colour change must not be lower than grade 3 after 3000 rubs.

**Specimen breakdown**

Rubs to specimen breakdown (end point) observed using a magnification of approximately 10x. The overall result is the lowest individual result obtained during testing.

	Specimen 1	Specimen 2	Specimen 3	Specimen 4	Overall Result
<b>No. rubs</b>	>100,000	>100,000	>100,000	>100,000	>100,000
<b>End point type</b>	End point not reached	End point not reached	End point not reached	End point not reached	

BS 2543: 2004 – Upholstery fabrics for end use applications-Classification - Specimen breakdown minimum requirements

	LD	GD	HD	GC	SC
<b>Flat woven</b>	15 000	20 000	25 000	30 000	40 000
<b>Pile</b>	15 000	20 000	25 000	25 000	30 000
<b>Figured weave</b>	12 000	15 000	20 000	30 000	40 000

LD = Light domestic    GD = General Domestic    HD = Heavy Domestic    GC = General Contract    SC = Severe Contract



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## Determination of Fabric Propensity to Surface Pilling, Fuzzing or Matting – Modified Martindale Method

Date of test: 30/09/24

Three specimens from each sample were tested on a modified Martindale Abrasion Machine using wool abradant fabric and a loading weight of  $415 \pm 2g$ , as stated in Annex A, Table A.1, following the Category 1 procedure for upholstery fabrics described in BS EN ISO 12945-2:2020.

Pre-treatment: none  
 Deviations/ unusual features:

The tested specimens were visually assessed by two observers and rated according to BS EN ISO 12945-4:2020.

No. of pilling rubs	Pilling Results				Fuzzing Results				Matting Results			
	1	2	3	mean	1	2	3	mean	1	2	3	mean
125	5	5	5	5	4-5	4-5	4-5	4-5	5	5	5	5
500	4-5	4-5	4-5	4-5	4	4	4	4	5	5	5	5
1000	4-5	4-5	4-5	4-5	4	4	4	4	5	5	5	5
2000	4-5	4-5	4-5	4-5	4	4	4	4	5	5	5	5
5000	4-5	4-5	4-5	4-5	4	4	4	4	5	5	5	5
7000	4-5	4-5	4-5	4-5	4	4	4	4	5	5	5	5

The requirements of BS 2543:2004(2015) at 2000 rubs (minimum grade) relating to pilling only are as follows:

LD	GD	HD	GC	SC
3-4	3-4	4	4	4

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Expanded uncertainty of measurement where  $k=2$  (approximately 95% confidence level) =  $\pm 0.5$  grading units



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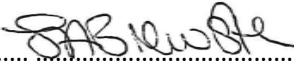
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Where required to make a judgement to any pass/fail criteria an estimation of uncertainty of measurement has been taken into account. Under our Policy we have used a non-binary decision rule.

See our decision rules Policy (<https://www.bttg.co.uk/about-us/decision-rules-policy/>) for further information.

Reported by:.......... K Marshall, Section LeaderCountersigned by:.......... J Brewster, Section Leader

Enquiries concerning this report should be addressed to Customer Services.



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## Uncertainty Budget

The overall uncertainty budget for BS EN ISO 12947-2 is as follows:-

Specimen breakdown

± 20 %

Shade change

± 0.5 Grade

The overall uncertainty budget for BS EN ISO 12945-2 is as follows:-

± 0.5 Grade

