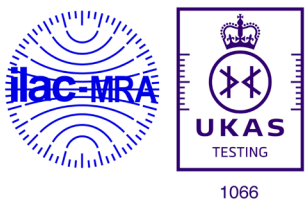
Shirley

Confidential Report

Our Ref: 29/03520D/01/25



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Email: textiles@bttg.co.uk
Website: www.bttg.co.uk

Date: 14 February 2025

Our Ref: 29/03520D/01/25
Your Ref: ---

Client: **Kvadrat A/S**

Lundbergsvej 10
8400 Ebeltoft
Denmark

Job Title: Various Test On One Sample of Fabric

Clients Order Ref: --

Date of Receipt: 24 January 2025

Description of Sample: One sample of fabric, referenced; Saxion 517, Stated to be: 89% new wool, worsted, 8% nylon, 3% polyester.

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

BS EN ISO 12945-2:2020
BS EN ISO 12947-2:2016
BS EN ISO 13936-2: 2004

* 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**

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

Date of test: 12/02/2025

Three specimens from the sample were tested on a modified Martindale Abrasion Machine using wool abradant fabric and a loading weight of 415 ± 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				Fuzzing				Matting			
	Result 1	Result 2	Result 3	**Mean**	Result 1	Result 2	Result 3	**Mean**	Result 1	Result 2	Result 3	**Mean**
125	5	5	5	**5**	5	5	5	**5**	5	5	5	**5**
500	5	5	5	**5**	5	5	5	**5**	5	5	5	**5**
1000	5	5	5	**5**	5	5	5	**5**	5	5	5	**5**
2000	5	5	5	**5**	5	5	5	**5**	5	5	5	**5**
5000	5	5	5	**5**	5	5	5	**5**	5	5	5	**5**
7000	5	5	5	**5**	5	5	5	**5**	5	5	5	**5**

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

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Determination of the Abrasion Resistance of Fabrics by the Martindale Method – Part 2: Determination of Specimen Breakdown (BS EN ISO 12947-2: 2016)

Four specimens from the sample were tested, under a nominal pressure of 12 kPa(795±7g) in accordance with BS EN ISO 12947-2:2016, using a Martindale abrasion tester as described in BS EN ISO 12947-1:1998.

Foam was not used to back the test specimens. Specimen breakdown (end point) was reached when two threads had completely broken. The change of shade of the test specimens was assessed in accordance with ISO 105-A02.

Individual results (number of rubs to end point)
>100,000
>100,000
>100,000
>100,000

Assessment:	maximum colour change at 3,000 rubs: grey scale 4-5
Result*:	>100,000
Type of fabric:	Flat Woven

* The quoted result is the lowest individual test result of all the test specimens tested.

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Client: **Kvadrat A/S**

Determination of the Slippage Resistance of Yarns at a Seam in Woven Fabric – BS EN ISO 13936-2: 2004 (2017) – 180N maximum force applied to specimens

Date of test: 04/02/2025

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.

Results

180N maximum force applied to specimens, fabric breakdown (FB) or seam breakdown (SB) is recorded as a failure.

Direction	Spec No.	Seam Opening (mm)	Fabric / Seam Breakdown (N)	Direction	Spec No.	Seam Opening (mm)	Fabric / Seam Breakdown (N)
Warp way seam (Warp slippage)	1	4.0	No	Weft way seam (Weft slippage)	1	2.0	No
	2	3.0	No		2	2.0	No
	3	4.0	No		3	2.0	No
	4	5.0	No		4	2.0	No
	5	4.0	No		5	3.0	No
	Mean	**4.0**			**Mean**	**2.0**	

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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 Leader

Countersigned 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 12945-2 is as follows:-

± 0.5 Grade

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 13936-2 is as follows:-

Overall uncertainty ± 4.7 %

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