



Confidential Report

Our Ref: 29/03447/09/24



Date: 03 October 2024

Our Ref: 29/03447/09/24
Your Ref: ---

Page: 1 of 5

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

Note: This report relates only to the items tested.



1066

Shirley® Technologies Limited. Registered Office: Wira House, West Park Ring Road, Leeds, LS16 6QL.
A company registered in England & Wales with company number 04669651. VAT Number GB 816764800.
BTTG™ and Shirley® are trade names of Shirley Technologies Ltd.
The supply of all goods and services is subject to our standard terms of business, copies of which are available on request.
Our laboratories are accredited to EN ISO/IEC 17025.

Copyright © 2024 Shirley Technologies Limited. All rights reserved.

Date: 03 October 2024

Our Ref: 29/03447/09/24

Your Ref: ---

Page: 2 of 5

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
No. rubs	>100,000	>100,000	>100,000	>100,000	>100,000
End point type	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
Flat woven	15 000	20 000	25 000	30 000	40 000
Pile	15 000	20 000	25 000	25 000	30 000
Figured weave	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



Shirley® Technologies Limited. Registered Office: Wira House, West Park Ring Road, Leeds, LS16 6QL.
 A company registered in England & Wales with company number 04669651. VAT Number GB 816764800.
 BTTG™ and Shirley® are trade names of Shirley Technologies Ltd.
 The supply of all goods and services is subject to our standard terms of business, copies of which are available on request.
 Our laboratories are accredited to EN ISO/IEC 17025.

Date: 03 October 2024

Our Ref: 29/03447/09/24
 Your Ref: ---

Page: 3 of 5

Client: **Kvadrat A/S**

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

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

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



Date: 03 October 2024

Our Ref: 29/03447/09/24


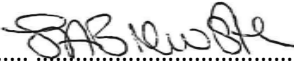
Your Ref: ---

Page: 4 of 5

Client: Kvadrat A/S

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.



Date: 03 October 2024

Our Ref: 29/03447/09/24

Your Ref: ---

Page: 5 of 5

Client: **Kvadrat A/S**

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

