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#### TEST REPORT

Client: Gabriel

> Hjulmagervej 55 Postbox 59 DK-9100 Aalborg

Denmark

98047-04 **Entry No:** 26/04/2018 Date received:

Client's Description: Sample of fabric: Just, Colour: 60120

**Test Required:** Pilling, Tensile Strength, Tear Resistance and Seam Slippage in accordance with

> BS EN 14465. Colour Fastness to Rubbing, Colour Fastness to Rubbing with Foam Detergent, Colour Fastness to Rubbing with Organic Solvents, Colour Fastness to Perspiration, Colour Fastness to Water, Colour Fastness to Light, Colour Fastness to Water Spotting<sup>s</sup>, Dimensional Stability to Washing and Stretch

and Recovery<sup>s</sup>

Conditioning: In accordance with BS EN ISO 139: 2005 for a minimum of 24 hours at

65+/-4%, Relative Humidity, 20+/-2°C

**Date Tests Completed:** 04/06/2018

Pilling: BS EN ISO 12945-2: 2000 Load 415g

Rating After 2,000 rubs After 5,000 rubs

Tensile Strength: BS EN ISO 13934-1: 2013

1800 N Warp Way 1100 N Weft Way

Tear Resistance: BS EN ISO 13937-3: 2000

Torn across Warp 122 N Torn across Weft 69 N

This is hereby certified to be a correct return of the tests made of the items referred to herein

Vivienne Brockbank

Technician 06 June 2018

Unless instructed otherwise by the client sample remnants will be disposed of after 28 days.

Tests marked <sup>N</sup> in this certificate are not included in the UKAS Accreditation Schedule for this Laboratory. Tests marked <sup>F</sup> in this certificate are performed under the Laboratory's Flexible Scope of Accreditation. Tests marked <sup>S</sup> in this certificate have been subcontracted to another ISO17025 Accredited Laboratory.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

Uncertainty budgets for test methods contained within this report are available on request.

This Certificate relates only to the sample received and, unless that sample has been drawn by the staff of this laboratory, or its agent, and endorsed accordingly, any application of the result to a bulk quantity or other material is entirely the responsibility of the client.







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Seam Slippage: BS EN ISO 13936-2: 2004

	Mean Seam opening
Warp Way Seam	3 mm
Weft Way Seam	<b>3</b> mm

Colour Fastness to Rubbing: BS EN ISO 105-X12: 2016F

<u>Staining</u>		Dry	<u>Wet</u>
_	Warp Way	5	5
	Weft Way	5	5
Change in Colour	•	Dry	Wet
-	Warp Way	5	5
	Weft Way	5	5

Note: Change in colour is not a requirement of the method but was carried out at the request of the client.

### Colour Fastness to Rubbing with Foam Detergent: BS EN ISO 105-X12: 2016F

		Detergent
Staining:	Warp Way	4-5
_	Weft Way	4-5
Change in colour:	Warp Way	5
-	Weft Way	5

Note: Change in colour is not a requirement of the method but was carried out at the request of the client.

## Colour Fastness to Rubbing with Organic Solvents: BS EN ISO 105-D02: 2016F

		<u>Tetrachloroethylene</u>	White Spirit
Staining:	Length Way	5	5
-	Width Way	5	5
		<u>Tetrachloroethylene</u>	White Spirit
Change in colour:	Length Way	5	5
	Width Way	5	5

#### Colour Fastness to Perspiration: BS EN ISO 105-E04: 2013

Staining on:		Acid	Alkali
_	Acetate	5	5
	Cotton	5	5
	Nylon 6.6	5	5
	Polyester	5	5
	Acrylic	5	5
	Wool	5	5
Change in	Colour	5	5

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Colour Fastness to Water: BS EN ISO 105-E01: 2013

 Staining on:
 Acetate
 5

 Cotton
 5

 Nylon 6.6
 5

 Polyester
 5

 Acrylic
 5

 Wool
 5

Change in Colour 5

Colour Fastness to Light: BS EN ISO 105-B02: 2014 Method 2

A specimen was exposed together with Standard References numbers 1-8. By comparison with the standard references the grading was found to be:

**BWS Rating** 

7

Colour Fastness to Water Spotting: BS EN ISO 105-E16:2007<sup>S</sup>

<u>Grade</u>

Inner circle of tested area: 4-5
Outer periphery of tested area: 4-5
Cross staining n/a

**<u>Dimensional Stability:</u>** BS EN ISO 5077: 2008

Washing Procedure: BS EN ISO 6330: 2012 Procedure 4M (40°C), Drying Procedure C Flat dry

Length -0.5 % Width -0.5 %

**Note:** a negative result indicates shrinkage.

<u>Dimensional Stability:</u> BS EN ISO 5077: 2008

Washing Procedure: BS EN ISO 6330: 2012 Procedure 6M (60°C), Drying Procedure C Flat dry

Length -2.0 % Width -2.5 %

**Note:** a negative result indicates shrinkage.

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# Stretch & Recovery: BS EN ISO 14704-1: 2005 Method A Load 27.5NS

Time @ full extension	1 Min & 30 Mins	
Length	<u> 1 Min</u>	30 Mins
Average % Recovery	99%	100%
Average % Residual Extension	1.0%	0%
Average % Stretch	7.3	3%
Width	<u> 1 Min</u>	<u>30 Mins</u>
Average % Recovery	99%	100%
Average % Residual Extension	1.0%	0%
Average % Stretch	6.	7%

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