



## TEST REPORT

**Client:** Gabriel  
 Hjulmagervej 55  
 Postbox 59  
 DK-9100 Aalborg  
 Denmark

**Entry No:** 99484-04

**Date received:** 08/06/2018

**Client's Description:** Sample of fabric: Mica 2497, Colour: 60004

**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 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:** 16/07/2018

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

|                  | <u>Rating</u> |
|------------------|---------------|
| After 2,000 rubs | 5             |
| After 5,000 rubs | 4-5           |

**Tensile Strength:** BS EN ISO 13934-1: 2013

|          |        |
|----------|--------|
| Warp Way | 1400 N |
| Weft Way | 1300 N |

**Tear Resistance:** BS EN ISO 13937-3: 2000

|                  |      |
|------------------|------|
| Torn across Warp | 64 N |
| Torn across Weft | 55 N |

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



Vivienne Brockbank  
 Technician  
 24 July 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

|               | <u>Mean Seam opening</u> |
|---------------|--------------------------|
| Warp Way Seam | 2 mm                     |
| Weft Way Seam | 3 mm                     |

**Colour Fastness to Rubbing:** BS EN ISO 105–X12: 2016<sup>F</sup>

| <u>Staining</u>         |          | <u>Dry</u> | <u>Wet</u> |
|-------------------------|----------|------------|------------|
|                         | Warp Way | 5          | 5          |
|                         | Weft Way | 5          | 5          |
| <u>Change in Colour</u> |          | <u>Dry</u> | <u>Wet</u> |
|                         | 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 Organic Solvents:** BS EN ISO 105–D02: 2016<sup>F</sup>

|                   |            | <u>Tetrachloroethylene</u> | <u>White Spirit</u> |
|-------------------|------------|----------------------------|---------------------|
| Staining:         | Length Way | 4-5                        | 5                   |
|                   | Width Way  | 4-5                        | 5                   |
| 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      |

**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 |

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**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  
**7-8**

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

|                                 | <u>Grade</u> |
|---------------------------------|--------------|
| Inner circle of tested area:    | <b>5</b>     |
| Outer periphery of tested area: | <b>4-5</b>   |
| Cross staining                  | <b>n/a</b>   |
| Shade change                    | <b>4-5</b>   |

**Dimensional Stability:** BS EN ISO 5077: 2008

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

|        |               |
|--------|---------------|
| Length | <b>-0.5 %</b> |
| Width  | <b>-0.5 %</b> |

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

**Dimensional Stability:** BS EN ISO 5077: 2008

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

|        |               |
|--------|---------------|
| Length | <b>-1.5 %</b> |
| Width  | <b>-2.0 %</b> |

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

**Stretch & Recovery:** BS EN ISO 14704-1: 2005 Method A Load 27.5N<sup>S</sup>

|                              | <u>1 Min &amp; 30 Mins</u> |                |
|------------------------------|----------------------------|----------------|
|                              | <u>1 Min</u>               | <u>30 Mins</u> |
| Length                       |                            |                |
| Average % Recovery           | <b>100%</b>                | <b>100%</b>    |
| Average % Residual Extension | <b>0%</b>                  | <b>0%</b>      |
| Average % Stretch            | <b>4.6%</b>                |                |
| Width                        |                            |                |
| Average % Recovery           | <b>100%</b>                | <b>100%</b>    |
| Average % Residual Extension | <b>0%</b>                  | <b>0%</b>      |
| Average % Stretch            | <b>6.0%</b>                |                |

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