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| Test Report | No. 28513318a | Date: 27th March 2023 | Page 1 of 6 |
|--------------------|----------------------|---|--------------------|

The following sample(s) was/were submitted and identified on behalf of the client as:

| | | |
|---------------------------|---|--|
| Sample Description | : | Renewed Loop col. 63131 |
| Customer | : | Gabriel |
| Address | : | Hjulmagervej 55, DK, 9000 Aalborg |
| Colour | : | 63131 Orange |
| Product type | : | Upholstery fabric |
| Fiber content | : | - |

Test Performed * : Selected test(s) as requested by applicant *

Sample Receiving Date : 16th February 2023


Testing Period : 16th February 2023 –3rd March 2023

Test Result(s) : For further details, please refer to the following page(s).
This 'a' report supersedes 28513318 as the elongation % has been added from test 13934-1.

Conclusion:

| Test Property | Results | Test Property | Results |
|-----------------------------------|---------|---|---------|
| Abrasion | - | Tensile | - |
| Pilling | - | Elasticity of Fabrics | - |
| Colour Fastness to Washing | - | Snagging | - |
| Colour fastness to Dry Clean | - | Tear | - |
| Colour fastness to Perspiration | - | Seam Slippage | - |
| | | Colour Fastness to Rubbing (Foam Detergent) | - |
| Colour fastness to Water | - | Colour fastness to Rubbing (Organic Solvents) | - |
| Colour Fastness to Water Spotting | - | | |

**Signed for and on behalf of
TÜV Rheinland UK LTD**



Digitally signed
by Dathan Stone
Date: 2023.03.27
14:28:46 +01'00'

Dathan Stone
Senior Laboratory Technician



Test result is drawn according to the kind and extent of tests performed.

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|--------------------|---------------|-----------------------------------|-------------|
| Test Report | No. 28513318a | Date: 27 th March 2023 | Page 2 of 6 |
|--------------------|---------------|-----------------------------------|-------------|

Results:

| | | | |
|--|-------------------|-------------------|-------------------|
| Abrasion Resistance (BS EN ISO 12947-2:2016/AC:2006 according to BS EN 14465); Martindale Wear & Abrasion Tester; 12 kPa Pressure) | | | |
| Result | | | |
| | Specimen 1 | Specimen 2 | Specimen 3 |
| End point reached, three thread breakdown | 105,000 | 105,000 | 105,000 |
| Overall endpoint | 105,000 | | |
| Colour Change At 3000 (rubs) | 5 | 5 | 5 |
| Remarks: Grey Scale Rating is based on the step scale of 1 to 5, where 1 is bad and 5 is good Observation Technique:40 fold magnification | | | |

| | |
|---|-------------------------------------|
| Pilling Resistance (BS EN ISO 12945-2:2020; Martindale Abrasion & Pilling Tester; Total Load Applied 415g, tested against wool abradent fabric) No cleansing required | |
| | Average Result |
| After 2000 Rubs Rating | 5 Fuzzing 5 Pilling 5 Matting |
| After 5000 Rubs Rating | 5 Fuzzing 5 Pilling 5 Matting |
| Remarks: Pilling Rating 5 - No change 4 - Slight surface fuzzing and/or partially formed pills 3 - Moderate surface fuzzing and/or moderate pilling. Pills of varying size and density partially covering the specimen 2 - Distinct fuzzing and/or distinct pilling. Pills of varying size and density covering a large proportion of the specimen surface 1 - Dense surface and/or severe pilling. Pills of varying size and density covering the whole of the specimen surface | |



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|--------------------|---------------|-----------------------------------|-------------|
| Test Report | No. 28513318a | Date: 27 th March 2023 | Page 3 of 6 |
|--------------------|---------------|-----------------------------------|-------------|

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|--|---------------|
| Colour Fastness To Washing (BS EN ISO 105-C06: 2010) Washing Condition: A2S, 40°C With ECE(B) + Sodium Perborate, 10 Steel Balls. | |
| Sample | Result |
| Colour Change | 5 |
| Self-Staining | 5 |
| Colour Staining | Result |
| Acetate | 5 |
| Cotton | 5 |
| Polyamide | 5 |
| Polyester | 5 |
| Acrylic | 5 |
| Wool | 5 |
| Remark: Grey Scale rating is based on the 5-step scale of 1 to 5, where 1 is bad and 5 is good | |

| | |
|--|---------------|
| Colour Fastness To Dry cleaning (BS EN ISO 105-D01: 2010) | |
| Sample | Result |
| Colour Change | 5 |
| Self-Staining | 5 |
| Colour Staining | Result |
| Acetate | 5 |
| Cotton | 5 |
| Polyamide | 5 |
| Polyester | 5 |
| Acrylic | 5 |
| Wool | 5 |
| Remark: Grey Scale rating is based on the 5-step scale of 1 to 5, where 1 is bad and 5 is good | |

| | | |
|--|---------------|-----------------|
| Colour Fastness To Perspiration (BS EN ISO 105-E04: 2013) | | |
| Sample | Result | |
| | Acid | Alkaline |
| Colour Change | 5 | 5 |
| Self-Staining | 5 | 5 |
| Colour Staining | Result | Result |
| Acetate | 5 | 5 |
| Cotton | 5 | 5 |
| Polyamide | 5 | 5 |
| Polyester | 5 | 5 |
| Acrylic | 5 | 5 |
| Wool | 5 | 5 |
| Remark: Grey Scale rating is based on the 5-step scale of 1 to 5, where 1 is bad and 5 is good | | |



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|--------------------|---------------|-----------------------------------|-------------|
| Test Report | No. 28513318a | Date: 27 th March 2023 | Page 4 of 6 |
|--------------------|---------------|-----------------------------------|-------------|

| Colour Fastness To Water (BS EN ISO 105-E01: 2013) test specimen in vertical position | |
|---|--------|
| Sample | Result |
| Colour Change | 5 |
| Self-Staining | 5 |
| Colour Staining | Result |
| Acetate | 5 |
| Cotton | 5 |
| Polyamide | 5 |
| Polyester | 5 |
| Acrylic | 5 |
| Wool | 5 |

Remark: Grey Scale rating is based on the 5-step scale of 1 to 5, where 1 is bad and 5 is good

| Colour Fastness To Rubbing (Foam Detergent) (BS EN ISO105-X12:2016); Size of rubbing finger: 16mm diameter | | | |
|--|--------------|--------|--------------|
| Sample | Result | | |
| | Warp | | Weft |
| | Dry: - | | Dry: - |
| Wet: 5 | % Soak: 100% | Wet: 5 | % Soak: 100% |

| Seam Slippage (BS EN ISO 13936-2:2004) | |
|--|--------|
| Sample | Result |
| Warp | 2.3 mm |
| Weft | 2.7 mm |

| Tear Strength (BS EN ISO 13937-3:2000) | |
|--|--------------------|
| Direction | Mean Maximum Force |
| Warp | 85.1 N |
| Weft | 86.6 N |



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|--------------------|---------------|-----------------------------------|-------------|
| Test Report | No. 28513318a | Date: 27 th March 2023 | Page 5 of 6 |
|--------------------|---------------|-----------------------------------|-------------|

| Tensile Strength (BS EN ISO 13934-1:2013) | | |
|---|---------------|-----------------------|
| | Result | Elongation (%) |
| Warp | 1500.2 N | 41.7 |
| Weft | 1498.4 N | 41.0 |

| Elasticity of fabrics (BS EN ISO 14704-1) Strip sample | | | | | |
|--|-------------------------|---------------------------------------|--|------------------------------------|-------------------------------------|
| Sample | Result | | | | |
| | Elongation at 27.5N (%) | Un-recovered Elongation at 1 mins (%) | Un-recovered Elongation at 30 mins (%) | Recovered Elongation at 1 mins (%) | Recovered Elongation at 30 mins (%) |
| Warp | 3.1 | 0.0 | 0.0 | 100.00 | 100.00 |
| Weft | 3.8 | 0.0 | 0.0 | 100.00 | 100.00 |

| Colour Fastness To Water Spotting (BS EN ISO105-E16:2007) | | |
|---|-------------------------------|---|
| Sample | Result | |
| | Shade change Centre | 5 |
| | Shade change Periphery | 5 |

| Colour Fastness To Rubbing – Organic Solvents (BS EN ISO105-D02:2016) | | |
|---|---------------|--------------|
| Sample | Result | |
| | Length | Width |
| Change in shade | 5 | 5 |
| Staining | 5 | 5 |
| Solvent used: Perchloroethylene | | |

| Snagging Resistance (Rotating Chamber Method) (BS 8479:2008) |
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|--------------------|----------------------|---|--------------------|
| Test Report | No. 28513318a | Date: 27th March 2023 | Page 6 of 6 |
|--------------------|----------------------|---|--------------------|

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| 2000 Revolutions | | |
| Measuring position | Grade | Defect type |
| Length | 4-5 | A |
| Width | 4-5 | |
| Total number of snags | ≤5 | |
| <p>Remark :</p> <p>Grading</p> <p>5 = No snags or other surface defects 4 = Snags or other surface defects in isolated areas 3 = Snags or other surface defects partially covering the surface 2 = Snags or other surface defects covering a large proportion of the surface 1 = Snags or other surface defects covering the entire surface</p> <p>Classification system for surface defects</p> <p>A = Snagging B = Protrusions C = Indentations D = Shiners, pulled threads or other distortions of the fabric structure, occurring in close proximity to snag loops and/or not associated with any snag loop E = Visible defects due to colour contrasts F = Filamentation G = Any other defects specific to the fabric type and which detract from the original surface appearance X = No visible surface defects</p> | | |

-End of Test Report-