

Test Report

Report No.: A 893562-5 rev 1



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INSTITUTE

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Order no.: 893562
No. of appendices: 1

Subject: Upholstery fabric, flat woven designated: Event 60022, grey. (as per info from the assigner).



Sampling: The test material was sampled by the client and received at the Danish Technological Institute 27.11.2019

Method: See Appendix 1.

Period: The testing was completed 10.01.2020

Result: Individual results appear from Appendix 1.

Storage: The test material will be destroyed after 6 months, unless otherwise agreed.

Terms: The accredited test was carried out according to DANAK's general conditions see www.danak.dk and according to the General Terms and Conditions regarding Commissioned Work Accepted by the Danish Technological Institute, which apply at the time of signing the agreement. The test is only valid for the tested specimen. The test report may only be extracted, if the laboratory has approved the extract.

Date/place: 21.01.2020, Danish Technological Institute, Wood and Biomaterials, Textile, Taastrup

Signature: Test responsible

Co-signatory



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| Test Methods | Results | | | | | | | | | | | | | | | | | | |
|--|---|----------------------------|----------------|----------------|-----------|---------------|------|------------------|------|---------|-----|----------------|----------------|-----------|------|-----|------------------|---|---|
| <p>Colour fastness to rubbing: Organic solvents ISO 105-D02:2016 1-5 scale, 5 best rating Rubbing finger: Cylinder 16 mm Force: 9 N Test conditions: 21°C, 65%RH</p> | <p>Tetrachloroethylene</p> <table border="1"> <thead> <tr> <th></th> <th>Warp direction</th> <th>Weft direction</th> </tr> </thead> <tbody> <tr> <td>Staining:</td> <td>4-5</td> <td>4-5</td> </tr> <tr> <td>Change in colour</td> <td>5</td> <td>5</td> </tr> </tbody> </table> <p>White Spirit</p> <table border="1"> <thead> <tr> <th></th> <th>Warp direction</th> <th>Weft direction</th> </tr> </thead> <tbody> <tr> <td>Staining:</td> <td>4-5</td> <td>4-5</td> </tr> <tr> <td>Change in colour</td> <td>5</td> <td>5</td> </tr> </tbody> </table> | | Warp direction | Weft direction | Staining: | 4-5 | 4-5 | Change in colour | 5 | 5 | | Warp direction | Weft direction | Staining: | 4-5 | 4-5 | Change in colour | 5 | 5 |
| | Warp direction | Weft direction | | | | | | | | | | | | | | | | | |
| Staining: | 4-5 | 4-5 | | | | | | | | | | | | | | | | | |
| Change in colour | 5 | 5 | | | | | | | | | | | | | | | | | |
| | Warp direction | Weft direction | | | | | | | | | | | | | | | | | |
| Staining: | 4-5 | 4-5 | | | | | | | | | | | | | | | | | |
| Change in colour | 5 | 5 | | | | | | | | | | | | | | | | | |
| <p>Colour fastness to washing EN ISO 105-C06:2010 Test no.: A1S (40°C) 1-5 scale, 5 best rating Detergent: ECE Bleaching agent: Adjacent fabric: Multifibre DW, ISO 105-F10:1989 Test conditions: 21°C, 65%RH</p> | <p>Staining of:</p> <table border="1"> <tbody> <tr> <td>Acetate</td> <td>4-5</td> </tr> <tr> <td>Cotton</td> <td>4-5</td> </tr> <tr> <td>Polyamide</td> <td>4-5</td> </tr> <tr> <td>Polyester</td> <td>4-5</td> </tr> <tr> <td>Acrylic</td> <td>4-5</td> </tr> <tr> <td>Wool</td> <td>4-5</td> </tr> </tbody> </table> <p>Change in colour: 4-5</p> | Acetate | 4-5 | Cotton | 4-5 | Polyamide | 4-5 | Polyester | 4-5 | Acrylic | 4-5 | Wool | 4-5 | | | | | | |
| Acetate | 4-5 | | | | | | | | | | | | | | | | | | |
| Cotton | 4-5 | | | | | | | | | | | | | | | | | | |
| Polyamide | 4-5 | | | | | | | | | | | | | | | | | | |
| Polyester | 4-5 | | | | | | | | | | | | | | | | | | |
| Acrylic | 4-5 | | | | | | | | | | | | | | | | | | |
| Wool | 4-5 | | | | | | | | | | | | | | | | | | |
| <p>Modified abrasion resistance – Martindale Part 2: Determination of specimen breakdown DS/EN ISO 12947-2:2016 Mass: 795 g Nominal pressure: 12 kPa Foam: Yes Microscope, Magnifying about 10 times. End-point: Three broken threads, According to EN 14465:2003 Colour change (1-5 scale, 5 best rating) ISO 105-A02:1993 Test conditions: 21°C, 65%RH</p> | <p>*Individual re- >100000 ->100000 ->100000->100000 rubs sults:</p> <p>Colour change: Note 4-5 after 3000rubs Colour change: Note 4-5 after 6000rubs</p> <p>*Stopped at 100000 rubs without endpoint reached Performance level A, according to EN14465:2003</p> <p>Performance levels of abrasion resistance for a flat woven fabric:</p> <table border="1"> <thead> <tr> <th>According to EN 14465:2004</th> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>Rubs (x 1000)</td> <td>≥ 35</td> <td>12-30</td> <td>4-10</td> </tr> </tbody> </table> | According to EN 14465:2004 | A | B | C | Rubs (x 1000) | ≥ 35 | 12-30 | 4-10 | | | | | | | | | | |
| According to EN 14465:2004 | A | B | C | | | | | | | | | | | | | | | | |
| Rubs (x 1000) | ≥ 35 | 12-30 | 4-10 | | | | | | | | | | | | | | | | |
| <p>Determination of fabric propensity to surface fuzzing and to pilling DS/EN ISO 12945-2:2000 Modified Martindale method 1-5 scale, 5 best rating Number of test specimens: 3 Number of observers: 2 Pre-treatment: none Abradant: Wool abradant fabric Loading mass: 415 g Test conditions: 21°C, 65%RH</p> | <table border="1"> <thead> <tr> <th>Assessment stage</th> <th>Number of rubs</th> <th>Pilling grade</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>500</td> <td>4-5</td> </tr> <tr> <td>2</td> <td>1000</td> <td>4-5</td> </tr> <tr> <td>3</td> <td>2000</td> <td>4-5</td> </tr> <tr> <td>4</td> <td>5000</td> <td>4-5</td> </tr> </tbody> </table> <p>Final grade 4-5</p> <p>The final grading at 2000 rubs relates to fuzzing</p> | Assessment stage | Number of rubs | Pilling grade | 1 | 500 | 4-5 | 2 | 1000 | 4-5 | 3 | 2000 | 4-5 | 4 | 5000 | 4-5 | | | |
| Assessment stage | Number of rubs | Pilling grade | | | | | | | | | | | | | | | | | |
| 1 | 500 | 4-5 | | | | | | | | | | | | | | | | | |
| 2 | 1000 | 4-5 | | | | | | | | | | | | | | | | | |
| 3 | 2000 | 4-5 | | | | | | | | | | | | | | | | | |
| 4 | 5000 | 4-5 | | | | | | | | | | | | | | | | | |

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| Test Methods | Results | | | | | | | | | | | | | | |
|---|---|------------------------|---------------------|------------------------|---------------------|-----------|---|-----------|---|---------|---|------|---|-------------------|---|
| <p>Dimensional change in washing and drying DS/EN ISO 5077:2009 Marking and measuring, DS/EN ISO 3759:2011 Washing and drying, DS/EN ISO 6330:2012, procedure: 6M (60°C, gentle), C (Flat drying) Machine: Type 1, front loading Detergent: ECE 2 without bleach Ballast: 2 kg (type 2, 50% cotton/50% polyester) Test conditions: 21°C, 65%RH</p> | <p>The results are averages of 6 determinations Measured on fabric.</p> <p style="text-align: center;"><u>1 x wash</u> <u>1 x drying</u></p> <p>Warp direction -2 % Weft direction -1,5 %</p> <p>- : Indicates shrinkage + : Indicates extension</p> | | | | | | | | | | | | | | |
| <p>Colour fastness to water spotting EN ISO 105-E16:2007 Test conditions: 21°C, 65%RH</p> | <table border="1"> <thead> <tr> <th><u>Colour</u></th> <th><u>Change</u></th> <th><u>Staining</u></th> </tr> </thead> <tbody> <tr> <td></td> <td style="text-align: center;">5</td> <td style="text-align: center;">5</td> </tr> </tbody> </table> | <u>Colour</u> | <u>Change</u> | <u>Staining</u> | | 5 | 5 | | | | | | | | |
| <u>Colour</u> | <u>Change</u> | <u>Staining</u> | | | | | | | | | | | | | |
| | 5 | 5 | | | | | | | | | | | | | |
| <p>Colour fastness to dry cleaning EN ISO 105-D01:2010 1-5 scale, 5 best rating Solvent: Perchlorethylene Adjacent fabric: Multifibre DW, ISO 105-F10:1989 Test conditions: 21°C, 65%RH</p> | <p>Staining of:</p> <table border="1"> <tbody> <tr> <td>Acetate</td> <td style="text-align: center;">5</td> </tr> <tr> <td>Cotton</td> <td style="text-align: center;">5</td> </tr> <tr> <td>Polyamide</td> <td style="text-align: center;">5</td> </tr> <tr> <td>Polyester</td> <td style="text-align: center;">5</td> </tr> <tr> <td>Acrylic</td> <td style="text-align: center;">5</td> </tr> <tr> <td>Wool</td> <td style="text-align: center;">5</td> </tr> <tr> <td>Change in colour:</td> <td style="text-align: center;">5</td> </tr> </tbody> </table> | Acetate | 5 | Cotton | 5 | Polyamide | 5 | Polyester | 5 | Acrylic | 5 | Wool | 5 | Change in colour: | 5 |
| Acetate | 5 | | | | | | | | | | | | | | |
| Cotton | 5 | | | | | | | | | | | | | | |
| Polyamide | 5 | | | | | | | | | | | | | | |
| Polyester | 5 | | | | | | | | | | | | | | |
| Acrylic | 5 | | | | | | | | | | | | | | |
| Wool | 5 | | | | | | | | | | | | | | |
| Change in colour: | 5 | | | | | | | | | | | | | | |
| <p>Determination of the slippage resistance of yarns at a seam in woven fabrics - Fixed load method DS/EN ISO 13936-2:2004 Performed on: Standard seam Load: 180 N Test conditions: 21°C, 65%RH</p> | <p>Average of 5 determinations</p> <table border="1"> <tbody> <tr> <td>Seam parallel to warp:</td> <td style="text-align: center;">2,5 mm seam opening</td> </tr> <tr> <td>Seam parallel to weft:</td> <td style="text-align: center;">2,5 mm seam opening</td> </tr> </tbody> </table> | Seam parallel to warp: | 2,5 mm seam opening | Seam parallel to weft: | 2,5 mm seam opening | | | | | | | | | | |
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