

**TEST REPORT N° 18/45780**

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Mod.018 Rev. 2 del 12.10.2015

|                            |                 |
|----------------------------|-----------------|
| <b>WEB Request Number</b>  |                 |
| <b>Receipt Number</b>      | <b>18/45606</b> |
| <b>Receipt date</b>        | <b>23/10/18</b> |
| <b>Test beginning date</b> | <b>24/10/18</b> |
| <b>Test end date</b>       | <b>25/10/18</b> |
| <b>Document issued on</b>  | <b>25/10/18</b> |

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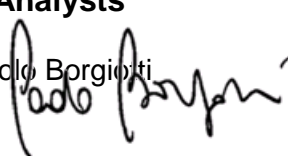
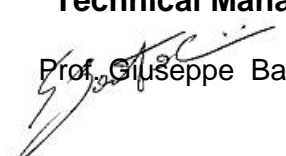
**SAMPLE IDENTIFICATION:**

**A TESSUTO ART. IN & OUT**

**THIS DOCUMENT CONTAINS THE FOLLOWING TESTS:**

| <b>Code</b> | <b>Test</b>  | <b>Test Method</b>      |
|-------------|--|-------------------------|
| TT0420      | Abrasion Resistance of Fabrics - Martindale Machine Method - Deterioration of the fabric | UNI EN ISO 12947-2:2017 |

Tests results refer only to tested samples submitted by the customer.  
On each page there is the Institute dry stamp.  
Tested samples are available for 3 months.

|  |  |
|--|--|
| <p><b>The Analysts</b></p> <p>Prof. Paolo Borgioji</p>  | <p><b>Technical Manager</b></p> <p>Prof. Giuseppe Bartolini</p>  |
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Private document. It is not allowed to publish and spread it without lab's written authorization.

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Beginning of Test Report

|                     |   |
|---------------------|---|
| TT0420              | <b>Abrasion Resistance of Fabrics - Martindale Machine Method - Deterioration of the fabric</b> |
| <i>Test methods</i> | <b>UNI EN ISO 12947-2:2017</b>  |

Rev.01 del 03/09/03

|                          |   |
|--------------------------|---|
| <i>Test environment</i>  | Samples acclimatized for 24 hours. Normal atmosphere (Temperature: 20°C; Relative Humidity: 65%) for acclimatisation and testing conditions: UNI EN ISO 139 : 11. |
| <i>Testing equipment</i> | Martindale Abrasion Tester - James H.Heal & Co. LTD. Gray scale UNI EN 20105 A02 : 96   |
| <i>Testing date</i>      | 25/10/2018  |

**Test Results :**

|                               |                                  |
|-------------------------------|----------------------------------|
| <b>Sample identification:</b> | <b>TESSUTO ART. IN &amp; OUT</b> |
|-------------------------------|----------------------------------|

|                      |                  |
|----------------------|------------------|
| <i>Pre-treatment</i> | <i>Untreated</i> |
| <i>Pressure</i>      | <i>12 kPa</i>    |

**Reached the deterioration (end point).**

|                          |                      |
|--------------------------|----------------------|
| <i>Average Abrasion</i>  | <b>40.000 rubs</b>   |
| <i>Colour change</i>     | <b>3 ISO 105-A02</b> |
| <i>Final Degradation</i> | <b>Moderate</b>      |

| <i>Degradation Hystory</i> |               |               |                    |                                  |
|----------------------------|---------------|---------------|--------------------|----------------------------------|
| <i>Rubs</i>                | <i>Damage</i> | <i>Effect</i> | <i>Degradation</i> | <i>Colour change ISO 105-A02</i> |
| 10.000                     |               | Colour        | Light              | 4/5                              |
| 20.000                     |               | Colour        | Light              | 4                                |
| 40.000                     |               | Colour        | Moderate           | 3                                |

*NB. The results reported in the tables above refer to a test analysis of the samples submitted.*

End of Test Report.