TEST REPORT

Determination of the abrasion resistance of fabric by Martindale method

1. Name and type of article - Fabric ZN-1

2. CLIENT - P.H. „STEMA” Stefan Boczyło  
   ul. Bystrzycka 17  
   58-100 ŚWIDNICA

3. Type of test
   - resistance to abrasion by Martindale method
     - loading – nominal pressure 12 kPa  
     - translational movement along Lissajous tracks
   - resistance to pilling  
     (modified Martindale’s method)  
     - loading – 260 g.  
     - translational movement along Lissajous tracks

   - inspection intervals after 1000, 2000, 5000 and 10000 cycles
   - the number cycles: average ~50.000
     - after 18 000 cycles, small single pillars; after 45 000 cycles, the surface of the samples is strongly peeled, after 60 000 cycles in all samples sawn individual threads.
     - after 2000 cycles – degree of change 5  
       (no changes)
     - after 5000 cycles – degree of change 4-5  
       (light pilling)

4. Documents identifying article - order.

This article was tested in accordance with the test procedures described in:

- PN-EN ISO 12947-2:2017
- PN-EN ISO 12945-2:2002
for conformity with PN-EN 14465:2005/A1:2007, annex A

TEST RESULTS:

POSITIVE

Article fulfill the requirements PN-EN 14465:2005, annex A. at the level category A

Attention: The test sample was acclimated according to PN-EN 20139:1993 (ISO 139)

Test operator

/M Sc. (Eng.) Jacek Konieczny/

Prezes Zarządu

/ngr. inż. Piotr Bieszczak/

TEST REPORT contain 1 page

The test results are only valid for the article tested.  
This TEST REPORT shall not be reproduced, except in full, without the written approval of the laboratory.
TEST REPORT No: 13/18/P
Assessment of ignitability


2. CLIENT – P.H. „STEMA” Stefan Boczyło
   ul. Bystrzycka 17
   58-100 ŚWIDNICA

3. Documents identifying article – order

4. This article was tested in accordance with the test procedures described in:
   PN-EN 1021-1:2014

5. Ignition source:
   smouldering cigarette

6. TEST RESULTS:
   POSITIVE

Test operator

/M Sc. (Eng.) Jacek Konieczny

PREZES ZARZĄDU
mgr inż. Piotr Bieszcak

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Test report – Assessment of ignitability

Materials tested - **Fabric ZN-1 – filling – standard polyurethane foam T-30.**

1. **Ignition source:** smouldering cigarette

2. **Test sample conditions:**
   - temperature - 21 °C
   - relative humidity - 50 %
   - time - 24 h

3. **Test results – NON-IGNITION**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>smouldering cigarette</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsafe escalating combustion</td>
<td>NO</td>
<td>Test 1 – smouldering time of the cigarette 27 min. 46 s</td>
</tr>
<tr>
<td></td>
<td></td>
<td>After this time, the cigarette went out, smoking ceased; the cigarette</td>
</tr>
<tr>
<td></td>
<td></td>
<td>burned out the whole length.</td>
</tr>
<tr>
<td>Test assembly consumed</td>
<td>NO</td>
<td>Test 2 – smouldering time of the cigarette 37 min. 32 s</td>
</tr>
<tr>
<td></td>
<td></td>
<td>After this time, the cigarette went out, smoking ceased; the cigarette</td>
</tr>
<tr>
<td></td>
<td></td>
<td>burned out the whole length.</td>
</tr>
<tr>
<td>Smoulders to extremities</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>Smoulders through thickness</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>Smoulders more than 1 hour</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>In final examination occurrence of smoulder</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dimensions of extent of the damage (mm)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>horizontal assembly</td>
<td>vertical assembly</td>
</tr>
<tr>
<td></td>
<td>length</td>
<td>width</td>
</tr>
<tr>
<td></td>
<td>65</td>
<td>18</td>
</tr>
</tbody>
</table>

The above test results relate only to the ignitability of the combination of materials under the particular conditions of test; they are not intended as a means of assessing the full potential fire hazard of the materials in use.