TFI Report 431623-04

Classification
of the Reaction to Fire according to EN 13501-1:2010

Report established for

Forbo Flooring BV
De Holwert 12
7741 KC Coeverden
THE NETHERLANDS

Product

resilient floor covering
floor covering: Forbo Allura Click
underlay: Forbo Click Underlay

Responsible at TFI

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Aachen, 28 October 2013
Dr. Ernst Schröder

This report includes 3 pages and 0 annex(es).
This report is a transcription and translation of test report no. 431623-02.

The present document is provided with a qualified electronic signature and is valid without autograph signature.

This report only applies to the tested specimens and has been established to the best of our knowledge. Only the entire report shall be reproduced. Under no circumstances, extracts shall be used. Furthermore, we apply the "General Terms and Conditions for the Execution of Contracts" of the Textiles & Flooring Institute GmbH, also with regard to the order execution.
1 Transaction

Test order Classification of the reaction to fire according to EN 13501-1:2010
Order date 16 October 2013
Your reference 13276265
Product designation(s) floor covering: Forbo Allura Click
underlay: Forbo Click Underlay
TFI sample number 13-10-0134, 13-10-0135 (Underlay)

2 Product specification

The construction products are completely described in the test reports mentioned under item 3 and in the corresponding Annexes KT. The test reports provide the basis for the present classification.

3 Results

3.1 Test reports and test results used for the classification

<table>
<thead>
<tr>
<th>Test laboratory</th>
<th>Report established for</th>
<th>Test report no.</th>
<th>Test method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textiles &amp; Flooring Institute GmbH</td>
<td>Forbo Flooring BV</td>
<td>431623-03</td>
<td>EN ISO 9239-1:2010</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>EN ISO 11925-2:2010 (15 s ignition time)</td>
</tr>
</tbody>
</table>

3.2 Test results

<table>
<thead>
<tr>
<th>Test method</th>
<th>Parameter</th>
<th>Number of tests</th>
<th>Mean value</th>
<th>Requirements fulfilled (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN ISO 9239-1:2010</td>
<td>Average critical heat flux [kW/m²]</td>
<td>3</td>
<td>10.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Integrated smoke value [% x min.]</td>
<td></td>
<td>248</td>
<td></td>
</tr>
<tr>
<td>EN ISO 11925-2:2010</td>
<td>Flame tip &lt; 150 mm</td>
<td>6</td>
<td>-</td>
<td>Y</td>
</tr>
</tbody>
</table>
3.3 Classification and field of application

The construction product “Forbo Allura Click” on “Forbo Click Underlay” is classified as follows with regard to the reaction to fire:

Bfl

The additional classification with regard to the smoke development is:

s1

The format of the reaction to fire classification for floor coverings is:

<table>
<thead>
<tr>
<th>Reaction to fire</th>
<th>Smoke development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bfl</td>
<td>s</td>
</tr>
</tbody>
</table>

**Classification of the reaction to fire: Bfl - s1**

This classification is valid for the following end use application:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substrate</td>
<td>Substrate according to EN 13238:2010 (particle board)</td>
</tr>
<tr>
<td>Type of underlay</td>
<td>Glued and unglued</td>
</tr>
<tr>
<td>Joint</td>
<td>n.r.</td>
</tr>
</tbody>
</table>

**Limitations**

The classification assigned to the construction product in this report is suited for a declaration of conformity by the manufacturer or a Declaration of Performance within the context of system 3 attestation of conformity and CE marking under the Construction Products Directive or Construction Products Regulation.

The manufacturer has made a declaration, which is held on file. This declaration confirms that the design of the product does not require any specific processes, procedures or stages (e.g. no addition of flame-retardants, limitation of organic contents or addition of fillers) that are aimed at enhancing the fire performance in order to obtain the classification achieved. As a consequence, the manufacturer has concluded that system 3 for the attestation of conformity respectively system 3 for the assessment and verification of the constancy of performance is appropriate.

The test laboratory has, therefore, played no part in sampling the product for the test, although it holds appropriate references, supplied by the manufacturer, to provide for traceability of the samples tested.