CLASSIFICATION OF REACTION TO FIRE PERFORMANCE
IN ACCORDANCE WITH EN 13501-1:2007+A1:2009

Classification no. 2014-Efectis-R000920
Sponsor Vescom BV
P.O. Box 70
5750 AB DEURNE
THE NETHERLANDS
Product name Xorel bio-based wall covering
Prepared by Efectis Nederland BV
Notified body no. 1234
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A.J. Lock
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1. INTRODUCTION

This classification report defines the classification assigned to Xorel bio-based wall covering in accordance with the procedures given in EN 13501-1:2007+A1:2009.

2. DETAILS OF CLASSIFIED PRODUCT

2.1 GENERAL

The product, Xorel bio-based wall covering, is defined as a wall covering.

2.2 MANUFACTURER

Carnegie Fabrics
110 North Centre Avenue
Rockville Centre, NEW YORK 11570
UNITED STATES OF AMERICA

2.3 PRODUCT DESCRIPTION

Product description:
- Fabric on a paper backing
- Fabric: 100% polyethylene, of which 60-80 % bio-based
- Mass fabric: 200 g/m$^2$
- Mass total: 340 g/m$^2$

The product has a mass per unit area of approx. 340 kg/m$^2$.

3. REPORTS, RESULTS AND CRITERIA IN SUPPORT OF THIS CLASSIFICATION

3.1 REPORTS

<table>
<thead>
<tr>
<th>Name of Laboratories</th>
<th>Name of sponsor</th>
<th>Report ref. no.</th>
<th>Test method</th>
</tr>
</thead>
</table>
3.2 TEST RESULTS

<table>
<thead>
<tr>
<th>Test method and test number</th>
<th>Parameter</th>
<th>No. tests</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Continuous parameter - mean (m)</td>
</tr>
<tr>
<td>EN ISO 11925-2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>surface flame impingement</td>
<td>Fs ≤ 150 mm</td>
<td>6</td>
<td>37</td>
</tr>
<tr>
<td>Ignition of filter paper</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Edge flame impingement</td>
<td>Fs ≤ 150 mm</td>
<td>6</td>
<td>25</td>
</tr>
<tr>
<td>Ignition of filter paper</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EN 13823</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FIGRA$_{0.2MJ}$ [W/s]</td>
<td>3</td>
<td>116</td>
</tr>
<tr>
<td></td>
<td>FIGRA$_{0.4MJ}$ [W/s]</td>
<td></td>
<td>108</td>
</tr>
<tr>
<td></td>
<td>THR$_{600s}$ [MJ]</td>
<td></td>
<td>3.2</td>
</tr>
<tr>
<td></td>
<td>LFS &lt; edge</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SMOGRA $[m^2/s^2]$</td>
<td></td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>TSP$_{600s}$ $[m^2]$</td>
<td></td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>Flaming debris</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- flaming ≤ 10 s</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>- flaming &gt; 10 s</td>
<td></td>
<td>Yes</td>
</tr>
</tbody>
</table>

3.3 CLASSIFICATION CRITERIA

Fire classification of construction products and building elements
Excluding floorings and linear pipe thermal insulation products

<table>
<thead>
<tr>
<th>Classification criteria</th>
<th>Class</th>
<th>Test method(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>B</td>
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<td></td>
<td>C</td>
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<tr>
<td></td>
<td>D</td>
<td>D</td>
</tr>
</tbody>
</table>

EN ISO 11925-2
Exposure = 30 s
F$_s$ ≤ 150 mm within 60 s
Ignition of the paper in EN ISO 11925-2 results in a d2 classification.

EN 13823
FIGRA$_{0.2MJ}$ ≤ 120 W/s
LFS < edge of specimen
THR$_{600s}$ ≤ 7.5 MJ
FIGRA$_{0.4MJ}$ ≤ 250 W/s
LFS < edge of specimen
THR$_{600s}$ ≤ 15 MJ
FIGRA$_{0.4MJ}$ ≤ 750 W/s

Additional classification

Smoke production
- s1 = SMOGRA ≤ 30 m$^2$/s$^2$ and TSP$_{600s}$ ≤ 50 m$^2$ ;
- s2 = SMOGRA ≤ 180 m$^2$/s$^2$ and TSP$_{600s}$ ≤ 200 m$^2$;
- s3 = not s1 or s2

Flaming Droplets/particles
- d0 = no flaming droplets/particles in EN 13823 within 600 s;
- d1 = no flaming droplets/particles persisting longer than 10 s in EN 13823 within 600 s;
- d2 = not d0 or d1.
4. CLASSIFICATION AND FIELD OF APPLICATION

4.1 REFERENCE OF CLASSIFICATION

This classification has been carried out in accordance with clause 11 of EN 13501-1:2007+ A1:2009.

4.2 CLASSIFICATION

The product, Xorel bio-based wall covering, in relation to its reaction to fire behaviour is classified:

B

The additional classification in relation to smoke production is:

s1

The additional classification in relation to flaming droplets / particles is:

d2

Reaction to fire classification: B - s1, d2

4.3 FIELD OF APPLICATION

This classification is valid for the following product parameters:

Surface density
- Fabric 200 kg/m²
- Total 340 kg/m²

This classification is valid for the following end use applications:

Substrate Non-combustible
(class A1/A2 according to EN 13238:2010)

Air gap Not applicable

Methods and means of fixing The wall covering was glued on the substrate according to the manufacturer's instructions, using the special adhesive "Vescom 2000"

Joints Vertical joints only

Other aspects of end use conditions Wall covering

4.4 DURATION OF THE VALIDITY OF THIS CLASSIFICATION REPORT

There are no limitations in time on the validity of this report.
5. LIMITATIONS

This classification document does not represent type approval or certification of the product.

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Project leader reaction to fire