TECHNICAL ASSESSMENT    2014-A-025

based on an analysis of test results

SPONSOR

ROBIN RESOURCES (MALAYSIA) Sdn. Bhd.
No. 1, Jalan Industri 5, Taman Perindustrian Temerloh
28400 Mentakab
Pahang Darul Makmur, Malaysia

SUBJECT

Extrapolation of test reports Nos. 16384A and 16384C, drawn up by WFRGENT nv, Ghent, concerning the reaction to fire of Flame Retardant Medium Density Fiberboards of the Robin FR1 MDF type.

This document has been drawn up as part of the analysis of test results as described in the RD of 13/06/2007.
1. TEST REPORTS

1.1 Reports

<table>
<thead>
<tr>
<th>Name of the laboratory</th>
<th>Number of the test report</th>
<th>Owner of the test report</th>
<th>Test standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>WFRGENT nv</td>
<td>16384A</td>
<td>Robin Resources (Malaysia) Sdn. Bhd.</td>
<td>BS 476 – 7 (1997)</td>
</tr>
<tr>
<td></td>
<td>16384C</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

On your request we have examined the above-mentioned test reports.

1.2 Description of the tested element

Test report No. 16384A gives the results of flame propagation tests carried out according to the British standard BS 476 – Part 7 (edition 1997), on fire retardant medium density fiberboards of the Robin FR1 MDF type (thickness: 18 mm; nominal density: 750 kg/m³; measured density: 760 kg/m³; manufacturer: Robin Resources (Malaysia) Sdn. Bhd.).

Test report No. 16384C gives the results of flame propagation tests carried out according to the British standard BS 476 – Part 7 (edition 1997), on fire retardant medium density fiberboards of the Robin FR1 MDF type (thickness: 9 mm; nominal density: 785 kg/m³; measured density: 796 kg/m³; manufacturer: Robin Resources (Malaysia) Sdn. Bhd.).

This test method or a previous edition is prescribed in section 2.3 Method No. 3 of the Belgian standard NBN S21-203 (edition 1980) and in section 2.3 Method 3 of Annex 5 of the Royal Decree of 19 December 1997 (Belgian Official Journal of 30 December 1997) modifying the Royal Decree of 7 July 1994 (Belgian Official Journal of 26 April 1995) laying down the basic standards for the prevention of fire and explosions that new buildings have to comply with.
2. RESULTS

The results obtained during these tests are given in the table below:

<table>
<thead>
<tr>
<th>Test specimen</th>
<th>16384A</th>
<th>16384C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness fiberboard</td>
<td>18 mm</td>
<td>9 mm</td>
</tr>
<tr>
<td>Nominal density</td>
<td>750 kg/m³</td>
<td>785 kg/m³</td>
</tr>
<tr>
<td>Test specimen</td>
<td>Spread of flame (mm) at 1' 30&quot; 10' 1' 30&quot; 10'</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>3</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>4</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>5</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>6</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>

3. FIELD OF APPLICATION

On the basis of the above-mentioned results we are of the opinion that fire retardant medium density fiberboards of the Robin FR1 MDF type (nominal density: 750 - 785 kg/m³; manufacturer: Robin Resources (Malaysia) Sdn. Bhd.) with a thickness between 9 and 18 mm, can be classified in class A1 according to the Belgian standard NBN S21-203 and Annex 5 of the RD of 19.12.97 (BOJ of 30.12.97) modifying the RD of 07.07.94 (BOJ of 26.05.95).

4. CONDITIONS FOR THE USE OF THE PRESENT ASSESSMENT

This assessment is only valid as far as the composition of the products has not been modified with respect to that of the tested products.

This assessment is only valid when accompanied by the above-referenced test reports.

It is self-evident that only tests on intermediate thicknesses according to the Belgian standard NBN S21-203 and Annex 5 to the RD of 19.12.97 can provide undeniable proof of this assessment.

This technical assessment cannot be combined with another technical evaluation, except when mentioned explicitly.
This assessment is issued on the basis of test data and information handed over at the time of the demand by the sponsor. If contradictory evidence becomes available afterwards, the assessment will be unconditionally withdrawn and the sponsor will be notified on this.

Also the sponsor has confirmed in writing that — according to his data — the element, described in the present assessment, has not yet been submitted for a fire test according to the standard/RD to which the assessment above refers.

The sponsor also confirms that he has not been informed about any non public information which could influence this assessment, and in consequence the obtained conclusions.

If the sponsor is informed afterwards about such information, he agrees to withdraw the assessment above and its use for regulated purposes — if applicable.

The sponsor also agrees to withdraw this assessment and its use for regulated purposes — if applicable — if the element, which is part of this assessment, is tested according to the standard/RD to which the assessment above refers.

This document is the original version of this technical evaluation and is written in English.

This technical assessment may be used only literally and completely for publications. For publications of certain texts, in which this technical assessment is mentioned, the permission of ISIB must be obtained in advance.

The present assessment contains 4 pages.

Date: 24 March 2014
End date of validity: 30 November 2016

Drawn up by

ir. Pieter Poppe
Project leader Technical Assessments

Reviewed by

ir. Edwin Van Wesemael
Technical Director ISIB