

## REACTION TO FIRE CLASSIFICATION REPORT No. RA11-0400 ACCORDING TO THE EUROPEAN STANDARD NF EN 13501-1+A1:2013

Notification by the French Government to the European Commission under no. 0679

Seule la version française fait foi

The French version is legally acceptable

### Product standards

**NF EN 13168:2013** "Thermal insulation products for buildings

Factory made wood wool (WW) products – Specification"

**NF EN 13964:2014** "Suspended ceilings - Requirements and test methods"

|                               |  |
|-------------------------------|--|
| <b>Owner:</b>                 | <b>KNAUF<br/>Zone d'Activité<br/>68600 WOLFGANTZEN<br/>FRANCE</b>  |
| <b>Commercial brand(s):</b>   | <b>FIBRALITH<br/>ORGANIC<br/>ORGANIC MEDIUM</b>  |
| <b>Manufacturing unit(s):</b> | <b>The manufacturing unit appears in the associated tests reports</b>  |
| <b>Brief description:</b>     | <b>Thermal insulation products made of wood wool bonded<br/>with a cement</b><br>(see detailed description in paragraph 2) |
| <b>Date of issue:</b>         | <b>August 03<sup>rd</sup>, 2015</b>  |

This classification report certifies only the characteristics of the object submitted for testing but does not prejudice the characteristics of similar products. So it does not constitute a product certification in the sense of Articles L 115-27 to L 115-33 and R 115-1 to R 115-3 of the Consumer Code.

If this report is being issued by e-mail and/or on an electronic medium, only the hard copy of the report signed by CSTB shall prevail in the event of a dispute.

The reproduction of this classification report is only authorised in its integral form.

It comprises 7 pages.

**Modification of the document for update of the commercial brands.**

## 1. Introduction

This classification report defines the classification assigned to the above-mentioned product(s) in accordance with the procedures given in the NF EN 13501-1+A1:2013 standard.

## 2. Product description

Thermal insulation products made of wood wool bonded with a cement.

The FIBRALITH, FIBRACOUSTIC, FIBRAFUTURA and ORGANIC references are presented into the form of wood wool panels made of long fibres, with a width between 1 mm to 2 mm made of selected coniferous woods, mineralized and agglomerated with binder (white or grey cement / white lime).

The COLORS range presents a painted side (acrylic or vegetal paint).

Nominal densities: from 250 to 460 kg/m<sup>3</sup>.

Maximum nominal quantity of paint: 450 g/m<sup>2</sup> for the painted versions.

Nominal thicknesses of the panels for the unpainted versions: from 7.5 to 100 mm.

Nominal thicknesses of the panels for the painted versions: from 15 to 100 mm.

Colours of the unpainted panels: grey or beige.

Colours and patterns of the painted panels: various.

## 3. Tests reports and tests results in support of this classification

### 3.1 Tests reports

| Name of laboratory | Name of sponsor   | Test identification | Test report No.   | Test method                                |
|--------------------|---|---------------------|-------------------|--|
| CSTB               | KNAUF<br>Zone d'Activité<br>68600 WOLFGANTZEN<br>FRANCE | ES541140734         | Modification file | -  |
|                    |   | ES541130102         | Extension file    | -  |
|                    |   | ES541110620         | RA12-0085         | NF EN 13823:2002<br>NF EN ISO 1716:2002    |
|                    |   | ES541110199         | RA11-0400         | NF EN ISO 11925-2:2002<br>NF EN 13823:2002 |
|                    |   | ES541040167         | RA05-0486         | NF EN 13823:2002                           |
|                    |   | ES541030451         | RA03-0418         | NF EN ISO 11925-2:2002<br>NF EN 13823:2002 |

### 3.2 Tests results

| Test method                           | Product                             | Number of tests | Parameters                  | Results                    |
|---------------------------------------|-------------------------------------|-----------------|-----------------------------|----------------------------|
|                                       |                                     |                 |                             | Compliance parameters      |
| NF EN 11925-2<br>30s surface exposure | FIBRAFUTURA (*)<br>25 mm thick      | 6               | Fs > 150 mm<br>Filter paper | Not reached<br>Not ignited |
|                                       | FIBRALITH<br>50 mm thick            | 6               | Fs > 150 mm<br>Filter paper | Not reached<br>Not ignited |
|                                       | FIBRAFUTURA DECO (*)<br>50 mm thick | 6               | Fs > 150 mm<br>Filter paper | Not reached<br>Not ignited |
|                                       | ORGANIC COLORS<br>50 mm thick       | 6               | Fs > 150 mm<br>Filter paper | Not reached<br>Not ignited |
|                                       | FIBRALITH<br>7,5 mm thick           | 6               | Fs > 150 mm<br>Filter paper | Not reached<br>Not ignited |
| NF EN 11925-2<br>30s edge exposure    | FIBRAFUTURA (*)<br>25 mm thick      | 6               | Fs > 150 mm<br>Filter paper | Not reached<br>Not ignited |
|                                       | FIBRALITH<br>50 mm thick            | 6               | Fs > 150 mm<br>Filter paper | Not reached<br>Not ignited |
|                                       | FIBRAFUTURA DECO (*)<br>50 mm thick | 6               | Fs > 150 mm<br>Filter paper | Not reached<br>Not ignited |
|                                       | ORGANIC COLORS<br>50 mm thick       | 6               | Fs > 150 mm<br>Filter paper | Not reached<br>Not ignited |
|                                       | FIBRALITH<br>7,5 mm thick           | 6               | Fs > 150 mm<br>Filter paper | Not reached<br>Not ignited |

(\*) The commercial brands "FIBRAFUTURA" and "FIBRAFUTURA DECO" do not exist anymore. However, the tests reports have been drawn up following tests carried out on those commercial brands. So we can mention them in the present Classification Report.

**3.2 Tests results (continuation)**

| Test method                            | Product                        | Number of tests              | Parameters                              | Results                                 |                       |             |
|--|--------------------------------|------------------------------|---|---|-----------------------|-------------|
|  |                                |                              |   | Continuous parameters<br>Mean values    | Compliance parameters |             |
| NF EN<br>13823                         | FIBRAFUTURA (*)<br>25 mm thick | 3                            | FIGRA <sub>0.2MJ</sub> (W/s)            | <b>55.5</b>                             | -                     |             |
|  |                                |                              | FIGRA <sub>0.4MJ</sub> (W/s)            | <b>47.0</b>                             | -                     |             |
|  |                                |                              | LFS                                     | -                                       | <b>Not reached</b>    |             |
|  |                                |                              |   | THR <sub>600s</sub> (MJ)                | <b>5.1</b>            | -           |
|  |                                |                              |   | SMOGRA(M <sup>2</sup> /S <sup>2</sup> ) | <b>0.0</b>            | -           |
|  |                                |                              |   | TSP <sub>600s</sub> (M <sup>2</sup> )   | <b>17.6</b>           | -           |
|  |                                |                              |   | Flaming droplets<br>or debris           | -                     | <b>None</b> |
|  | FIBRALITH<br>75 mm thick       | 3                            | FIGRA <sub>0.2MJ</sub> (W/S)            | <b>41.7</b>                             | -                     |             |
|  |                                |                              | FIGRA <sub>0.4MJ</sub> (W/S)            | <b>40.7</b>                             | -                     |             |
|  |                                |                              | LFS                                     | -                                       | <b>Not reached</b>    |             |
|  |                                |                              |   | THR <sub>600s</sub> (MJ)                | <b>5.7</b>            | -           |
|  |                                |                              |   | SMOGRA(M <sup>2</sup> /S <sup>2</sup> ) | <b>0.0</b>            | -           |
|  |                                |                              | TSP <sub>600s</sub> (M <sup>2</sup> )   | <b>23.6</b>                             | -                     |             |
|  |                                |                              | Flaming droplets<br>or debris           | -                                       | <b>None</b>           |             |
| FIBRAFUTURA DECO<br>(*)<br>50 mm thick | 3                              | FIGRA <sub>0.2MJ</sub> (W/S) | <b>87.4</b>                             | -                                       |                       |             |
|  |                                | FIGRA <sub>0.4MJ</sub> (W/S) | <b>62.9</b>                             | -                                       |                       |             |
|  |                                | LFS                          | -                                       | <b>Not reached</b>                      |                       |             |
|  |                                |                              | THR <sub>600s</sub> (MJ)                | <b>5.2</b>                              | -                     |             |
|  |                                |                              | SMOGRA(M <sup>2</sup> /S <sup>2</sup> ) | <b>0.0</b>                              | -                     |             |
|  |                                |                              | TSP <sub>600s</sub> (M <sup>2</sup> )   | <b>26.4</b>                             | -                     |             |
|  |                                |                              | Flaming droplets<br>or debris           | -                                       | <b>None</b>           |             |
| FIBRALITH<br>100 mm thick              | 3                              | FIGRA <sub>0.2MJ</sub> (W/S) | <b>20.7</b>                             | -                                       |                       |             |
|  |                                | FIGRA <sub>0.4MJ</sub> (W/S) | <b>17.3</b>                             | -                                       |                       |             |
|  |                                | LFS                          | -                                       | <b>Not reached</b>                      |                       |             |
|  |                                |                              | THR <sub>600s</sub> (MJ)                | <b>2.0</b>                              | -                     |             |
|  |                                |                              | SMOGRA(M <sup>2</sup> /S <sup>2</sup> ) | <b>0.0</b>                              | -                     |             |
|  |                                |                              | TSP <sub>600s</sub> (M <sup>2</sup> )   | <b>14.0</b>                             | -                     |             |
|  |                                |                              | Flaming droplets<br>or debris           | -                                       | <b>None</b>           |             |

(-) means : not applicable

(\*) The commercial brands "FIBRAFUTURA" and "FIBRAFUTURA DECO" do not exist anymore. However, the tests reports have been drawn up following tests carried out on those commercial brands. So we can mention them in the present Classification Report.

### 3.2 Tests results (continuation)

| Test method | Product                       | Number of tests | Parameters                              | Results                              |                       |
|-------------|-------------------------------|-----------------|---|--------------------------------------|-----------------------|
|             |                               |                 |   | Continuous parameters<br>Mean values | Compliance parameters |
| NF EN 13823 | ORGANIC COLORS<br>50 mm thick | 3               | FIGRA <sub>0.2MJ</sub> (W/S)            | <b>47.6</b>                          | -                     |
|             |                               |                 | FIGRA <sub>0.4MJ</sub> (W/S)            | <b>40.2</b>                          | -                     |
|             |                               |                 | LFS                                     | -                                    | <b>Not reached</b>    |
|             |                               |                 | THR <sub>600s</sub> (MJ)                | <b>3.0</b>                           | -                     |
|             |                               |                 | SMOGRA(M <sup>2</sup> /S <sup>2</sup> ) | <b>0.0</b>                           | -                     |
|             |                               |                 | TSP <sub>600s</sub> (M <sup>2</sup> )   | <b>17.8</b>                          | -                     |
|             |                               |                 | Flaming droplets<br>or debris           | -                                    | <b>None</b>           |

(-) means : not applicable

### 3.3 Complementary tests

| Test method                  | Product  | Number of tests | Parameters                              | Results                                 |                       |   |
|------------------------------|--|-----------------|---|---|-----------------------|---|
|                              |  |                 |   | Continuous parameters<br>Mean values    | Compliance parameters |   |
| NF EN 13823                  | FIBRAFUTURA (*)<br>50 mm thick<br>(White cement) | 1               | FIGRA <sub>0.2MJ</sub> (W/s)            | <b>36.0</b>                             | -                     |   |
|                              |  |                 | FIGRA <sub>0.4MJ</sub> (W/s)            | <b>31.1</b>                             | -                     |   |
|                              |  |                 | LFS                                     | -                                       | <b>Not reached</b>    |   |
|                              |  |                 |   | THR <sub>600s</sub> (MJ)                | <b>3.4</b>            | - |
|                              |  |                 |   | SMOGRA(m <sup>2</sup> /s <sup>2</sup> ) | <b>0.0</b>            | - |
|                              |  |                 |   | TSP <sub>600s</sub> (m <sup>2</sup> )   | <b>22.9</b>           | - |
|                              |  |                 | Flaming droplets<br>or debris           | -                                       | <b>None</b>           |   |
|                              | FIBRALITH<br>7.5 mm thick                        | 1               | FIGRA <sub>0.2MJ</sub> (W/s)            | <b>36.8</b>                             | -                     |   |
| FIGRA <sub>0.4MJ</sub> (W/s) |  |                 | <b>29.4</b>                             | -                                       |                       |   |
| LFS                          |  |                 | -                                       | <b>Not reached</b>                      |                       |   |
|                              |  |                 | THR <sub>600s</sub> (MJ)                | <b>3.6</b>                              | -                     |   |
|                              |  |                 | SMOGRA(m <sup>2</sup> /s <sup>2</sup> ) | <b>0.0</b>                              | -                     |   |
|                              |  |                 | TSP <sub>600s</sub> (m <sup>2</sup> )   | <b>21.1</b>                             | -                     |   |
|                              |  |                 | Flaming droplets<br>or debris           | -                                       | <b>None</b>           |   |

(-) means : not applicable

(\*) The commercial brand "FIBRAFUTURA" does not exist anymore. However, the tests reports have been drawn up following tests carried out on this commercial brand. So we can mention it in the present Classification Report.

#### 4. Classification and direct field of application

##### 4.1 Reference of the classification

This classification has been carried out in accordance with clauses 11.6, 11.9.2 and 11.10.1 of the NF EN 13501-1+A1:2013 standard.

##### 4.2 Classification

| Fire behaviour |   | Smoke production |   | Flaming droplets or debris |
|----------------|---|------------------|---|----------------------------|
| <b>B</b>       | - | <b>s1</b>        | , | <b>d0</b>                  |

**Classification: B - s1, d0**

##### 4.3 Field of application

This classification is valid for the following product parameters:

- The products described in paragraph 2.
- A range of nominal thicknesses from 7.5 to 100 mm for the unpainted versions.
- A range of nominal thicknesses from 15 to 100 mm for the painted versions.
- A range of nominal densities from 250 to 460 kg/m<sup>3</sup>.
- A maximum nominal quantity of paint of 450 g/m<sup>2</sup> for the painted versions.

This classification is valid for the following end use conditions:

- Without substrate or with any A1 or A2-s1,d0 class substrate with a density  $\geq 820$  kg/m<sup>3</sup>.
- With or without air gap.

**5. List of modifications of commercial brands**

| <b>Former commercial brands list</b>   | <b>New commercial brands list</b> |
|--|-----------------------------------|
| FIBRALITH<br>FIBRALITH Clarté<br>FIBRALITH CB / FIBRALITH WZ<br>FIBRACOUSTIC GZ<br>FIBRACOUSTIC WZ                             | FIBRALITH<br>ORGANIC MEDIUM       |
| FIBRAFUTURA CB<br>FIBRAFUTURA CB DECO<br>FIBRAFUTURA<br>FIBRAFUTURA DECO<br>ORGANIC PURE<br>ORGANIC GRAPHITE<br>ORGANIC COLORS | ORGANIC                           |

**6. Limitations**

The present document does not represent type approval or certification of the product.

The classification assigned to the product in this report is appropriate to a declaration of performance by the manufacturer within the context of system 3 attestation of conformity and CE marking under the European Construction Products Regulation (regulation UE no. 305/2011). The manufacturer has made a declaration, which is held on file. This confirms that the products design requires no specific processes, procedures or stages (e.g. no addition of flame-retardants, limitation of organic content, 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 attestation 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.

Champs-sur-Marne, August 03<sup>rd</sup>, 2015

**The Report Writer**

**Franck GOGUEL**

**The Head of Reaction to Fire Unit**

**Gildas CREACH**

.....END OF THE CLASSIFICATION REPORT