

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

**Sponsor:** Lumir Oy  
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**Notified Body No:** 0809

**Product:** Lumir Spray, Lumir Hygiene and Coolia-Lumir

**Classification report No:** VTT-S-04584-17

**Date of issue:** 16 October 2017

This classification report consists of seven pages and may be used or reproduced in its entirety.



## 1 Introduction

This classification report defines the classification assigned to the Lumir Spray, Lumir Hygiene and Coolia-Lumir in accordance with the procedures given in EN 13501-1:2007 + A1:2009.

## 2 Details of classified product

### 2.1 General

The products Lumir Spray, Lumir Hygiene and Coolia-Lumir are defined as wood based sound insulation panels.

### 2.2 Product description

The products Lumir Spray, Lumir Hygiene and Coolia-Lumir are described below.

Manufacturer: Lumir Oy

Description of Lumir Spray:

Construction of product:

- Lumir Spray coating: layer of flame retarded wood based fibres, 5...6 mm, amount of flame retardants based on boron 10...15 w-%
- Glass fibre non-woven, about 115 g/m<sup>2</sup>
- Perforated gypsum board, 10 mm
- Viscose felt, 50 g/m<sup>2</sup>, 0,22 mm

Description of Lumir Hygiene:

Construction of product:

- Lumir Hygiene coating: layer of flame retarded wood based fibres with anti-bacterium spray, 5...6 mm, amount of flame retardants based on boron 10...15 w-%
- Glass fibre non-woven, about 115 g/m<sup>2</sup>
- Perforated gypsum board, 10 mm
- Viscose felt, 50 g/m<sup>2</sup>, 0,22 mm

Description of Coolia-Lumir:

Construction of product:

- Lumir Comfort coating: Layer of flame retarded wood based fibres, thickness 5...6 mm, amount of flame retardants 10...15 w-%
- Glass fibre non-woven, about 115 g/m<sup>2</sup>
- Perforated gypsum board with tubing for water manufactured by Warmia
- Perforated gypsum board, 10 mm
- Viscose felt, 50 g/m<sup>2</sup>, 0,22 mm



The test results relate only to the sample tested.

### 3 Test reports and test results in support of classification

#### 3.1 Test reports

Name of laboratory	Name of sponsor	Test report	Test method and date
VTT Expert Services Ltd	Lumir Oy	VTT-S-04582-17	EN 13823 16 October 2017
VTT Expert Services Ltd	Lumir Oy	VTT-S-04683-17	EN ISO 11925-2 16 October 2017



The test results relate only to the sample tested.

### 3.2 Test results

Test method	Parameter	Number of tests	Continuous parameter mean	Compliance parameters
EN 13823	FIGRA <sub>0,2 MJ</sub> (W/s)	1 <sup>1)</sup>	99,6	Compliant
	FIGRA <sub>0,4 MJ</sub> (W/s)	1 <sup>1)</sup>	62,6	Compliant
	THR <sub>600s</sub> (MJ)	1 <sup>1)</sup>	3,4	Compliant
	LFS edge	1 <sup>1)</sup>	No	Compliant
	SMOGRA (m <sup>2</sup> /s <sup>2</sup> )	1 <sup>1)</sup>	0	Compliant
	TSP <sub>600s</sub> (m <sup>2</sup> )	1 <sup>1)</sup>	11,1	Compliant
	Flaming droplets / particles	1 <sup>1)</sup>	No	Compliant
EN 13823	FIGRA <sub>0,2 MJ</sub> (W/s)	1 <sup>2)</sup>	91,0	Compliant
	FIGRA <sub>0,4 MJ</sub> (W/s)	1 <sup>2)</sup>	54,1	Compliant
	THR <sub>600s</sub> (MJ)	1 <sup>2)</sup>	2,8	Compliant
	LFS edge	1 <sup>2)</sup>	No	Compliant
	SMOGRA (m <sup>2</sup> /s <sup>2</sup> )	1 <sup>2)</sup>	0	Compliant
	TSP <sub>600s</sub> (m <sup>2</sup> )	1 <sup>2)</sup>	0	Compliant
	Flaming droplets / particles	1 <sup>2)</sup>	No	Compliant

- 1) Lumir Spray without cavity on calcium silicate backing board
- 2) Lumir Hygiene without cavity on calcium silicate backing board

Table continues on page 4.



The test results relate only to the sample tested.

Test method	Parameter	Number of tests	Continuous parameter mean	Compliance parameters
EN 13823	FIGRA <sub>0,2 MJ</sub> (W/s)	1 <sup>3)</sup>	89,7	Compliant
	FIGRA <sub>0,4 MJ</sub> (W/s)	1 <sup>3)</sup>	58,6	Compliant
	THR <sub>600s</sub> (MJ)	1 <sup>3)</sup>	2,9	Compliant
	LFS edge	1 <sup>3)</sup>	No	Compliant
	SMOGRA (m <sup>2</sup> /s <sup>2</sup> )	1 <sup>3)</sup>	0	Compliant
	TSP <sub>600s</sub> (m <sup>2</sup> )	1 <sup>3)</sup>	0	Compliant
	Flaming droplets / particles	1 <sup>3)</sup>	No	Compliant
EN 13823	FIGRA <sub>0,2 MJ</sub> (W/s)	3 <sup>4)</sup>	92,7	Compliant
	FIGRA <sub>0,4 MJ</sub> (W/s)	3 <sup>4)</sup>	62,9	Compliant
	THR <sub>600s</sub> (MJ)	3 <sup>4)</sup>	3,4	Compliant
	LFS edge	3 <sup>4)</sup>	No	Compliant
	SMOGRA (m <sup>2</sup> /s <sup>2</sup> )	3 <sup>4)</sup>	0	Compliant
	TSP <sub>600s</sub> (m <sup>2</sup> )	3 <sup>4)</sup>	15,8	Compliant
	Flaming droplets / particles	3 <sup>4)</sup>	No	Compliant
EN ISO 11925-2 surface exposure, edge exposure and edge exposure specimen turned at 90° round its vertical axis 30 s exposure flaming droplets/particles	Fs ≤ 150 mm	24 <sup>5)</sup>	-	Compliant
	ignition of the filter paper	24 <sup>5)</sup>	-	Compliant

3) Coolia-Lumir without cavity on calcium silicate backing board

4) Lumir Spray without cavity on calcium silicate backing board

5) Lumir Spray, tested with surface exposure and edge exposure to the front side and edge exposure test specimen turned by 90° (bottom edge of Lumir Spray coating, glass fibre non-woven, perforated gypsum board and viscose felt)



The test results relate only to the sample tested.

## 4 Classification and field of application

### 4.1 Reference of classification

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

### 4.2 Classification

The products Lumir Spray, Lumir Hygiene and Coolia-Lumir in relation to reaction to fire behaviour are classified:

B

The additional classification in relation to smoke production is:

s1

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

d0

The format of the reaction to fire classification is:

Fire behaviour		Smoke production			Flaming droplets	
B	-	s	1	,	d	0

i.e.: B-s1, d0



The test results relate only to the sample tested.

### 4.3 Field of application

This classification is valid for the following product parameters:

- Thickness of Lumir coating 5...6 mm
- Amount of flame retardants in Lumir coating at least 10...15 w-%
- Thickness of perforated gypsum board at least 10 mm

This classification is valid for the following end use conditions:

- Substrates of classes A1 and A2-s1, d0 with density at least 653 kg/m<sup>3</sup>
- Without vertical or horizontal joints

### 5 Limitations

This classification report does not represent type approval or certification of the products.

Espoo, 16 October 2017



Kai Renholm  
Business Manager



Tiia Ryyänen  
Product Manager

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