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**CLASSIFICATION**

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

| | |
|---|---|
| Classification no. | 2017-Efectis-R000322 |
| Sponsor | ACT Europe<br>Active Composite Technologies<br>Nijverheidsweg 15A<br>3251 LP STELLENDAM<br>THE NETHERLANDS |
| Product name | **A1 (an acrylic based material)** |
| Prepared by | Efectis Nederland BV |
| Notified body no. | 1234 |
| Author(s) | C.C.M. Steinhage B.Sc.<br>A.J. lock |
| Project number | ENL-17-000123 |
| Date of issue | April 2017 |
| Number of pages | 5 |

## 1. INTRODUCTION

This classification report defines the classification assigned to **A1 (an acrylic based material)** in accordance with the procedures given in EN 13501-1:2007+A1:2009.

## 2. DETAILS OF CLASSIFIED PRODUCT

### 2.1 GENERAL

The product, **A1 (an acrylic based material)**, is defined as a general purpose building material.

### 2.2 MANUFACTURER/IMPORTER

ACT Europe
Active Composite Technologies
Nijverheidsweg 15A
3251 LP STELLENDAM
THE NETHERLANDS

### 2.3 PRODUCT DESCRIPTION

According to the sponsor the product is composed of:
- 9.33 kg A1, 0.640 kg glass fibre and 2.33 kg sand (25% of mass A1) per unit area.

The acrylic component A1 is composed of:
- Mixing ratio 2 parts powder, 1 part acrylic resin
- Colour creamy white. The colour of A1 can vary slightly with every production batch.
- Density (wet) 1.75 kg / $dm^3$
- Density (dry) 1.66 kg / $dm^3$
- Hardness 85º Shore D

The product has a thickness of approx. 6 mm and a mass per unit area of approx. 12.3 $kg/m^2$.

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

### 3.1 APPLICABLE (PRODUCT) STANDARDS

| | |
|---|---|
| EN 13823:2010+A1:2014 | Reaction to fire tests for building products - Building products, excluding floorings exposed to the thermal attack by a single burning item |
| EN-ISO 1716:2013 | Reaction to fire tests for products - Determination of the gross heat of combustion (calorific value) |
| EN 13501-:2007+A1:2009 | Fire classification of construction products and building elements<br>Part 1: Classification using data from reaction to fire tests |

## 3.2 REPORTS

| Name of Laboratories | Name of sponsor | Report ref. no. | Test method |
|---|---|---|---|
| Efectis France<br>France<br>Efectis Nederland BV<br>The Netherlands | ACT Europe<br>THE NETHERLANDS | EFR-16-HC-003402<br>2017-Efectis-R000320<br>2017-Efectis-R000321 | EN ISO 1716:2013<br>EN ISO 1716:2013<br>EN 13823:2014 |

## 3.3 TEST RESULTS

| Test method and test number | Parameter | No. tests | Results | |
|---|---|---|---|---|
| | | | Continuous parameter – mean (m) | Compliance with parameters |
| **EN 13823** | | | | |
| | FIGRA0.2MJ [W/s] | 3 | 67 | - |
| | FIGRA0.4MJ [W/s] | | 65 | - |
| | THR600s [MJ] | | 5.7 | - |
| | LFS < edge | | - | Compliant |
| | SMOGRA [$m^2/s^2$] | | 2.2 | - |
| | TSP600s [$m^2$] | | 29 | - |
| | Flaming debris<br>- flaming ≤ 10 s<br>- flaming > 10 s | | - | <br>Compliant<br>Compliant |
| **EN ISO 1716** | | | | |
| The product is homogeneous | | | | |
| Product as a whole | | [MJ/kg] | 2.98 | Compliant |

## 3.4 CLASSIFICATION CRITERIA

| Fire classification of construction products and building elements<br>Excluding floorings and linear pipe thermal insulation products | | | |
|---|---|---|---|
| **Class** | **Test method(s)** | **Classification criteria** | **Additional classification** |
| **A2** | EN ISO 1182 [a]<br><br>Or | ΔT ≤ 50 °C; and<br>Δm ≤ 50 %; and<br>$t_f$ ≤ 20 s | - |
| | EN ISO 1716<br><br><br>And | PCS ≤ 3,0 MJ/kg [a] and<br>PCS ≤ 4,0 MJ/$m^2$ [b] and<br>PCS ≤ 4,0 MJ/$m^2$ [d] and<br>PCS ≤ 3,0 MJ/kg [e] | - |
| | EN 13823 | FIGRA ≤ 120 W/s and<br>LFS < edge of specimen and<br>$THR_{600s}$ ≤ 7,5 MJ | Smoke production [f] and<br>Flaming droplets/particles [g] |

[a] For homogeneous products and substantial components of non-homogeneous products.
[b] For any external non-substantial component of non-homogeneous products.
[c] Alternatively, any external non-substantial component having a PCS ≤ 2,0 MJ/m$^2$ , provided that the product satisfies the following criteria of EN 13823: FIGRA ≤ 20 W/s, and LFS < edge of specimen, and $THR_{600s}$ ≤ 4,0 MJ, and s1, and d0.
[d] For any internal non-substantial component of non-homogeneous products.
[e] For the product as a whole.
[f] **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
[g] **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, **A1 (an acrylic based material)**, in relation to its reaction to fire behaviour is classified:

**A2**

The additional classification in relation to smoke production is:

**s1**

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

**d0**

**Reaction to fire classification: A2 – s1, d0**

## 4.3 FIELD OF APPLICATION

This classification is valid for the following product parameters:

| | |
|---|---|
| Thickness | 6 mm |
| Surface density | 12.3 kg/m$^2$ |
| Other properties | Colour: creamy white |

This classification is valid for the following end use applications:

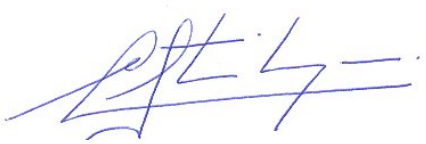
| | |
|---|---|
| Substrate | Not applicable |
| Air gap | Including air gap |
| Methods and means of fixing | Mechanically |
| Joints | No joints |
| Other aspects of end use conditions | General purpose building material |

### 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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