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Title:

CLASSIFICATION OF REACTION TO FIRE PERFORMANCE
IN ACCORDANCE WITH
EN 13501-1: 2018.

Product Name:

"Flamesure"

Report No:

WF 506338

Issue No:

1

Prepared for:

EasyFLEX Roofing ApS
Hesthøjvej 13
7970
Roslev
Denmark

Date:

2nd November 2021

Warringtonfire Testing and Certification Limited
Registered in England and Wales
Registered Office: 3rd Floor, Davidson Building, 5 Southampton Street, London, WC2E 7HA
Company Registration No: 11371436

1. Introduction

This classification report defines the classification assigned to "Flamesure", a fire retardant grade cloth, in line with the procedures given in EN 13501-1: 2018.

2. Details of classified product

2.1 General

The product, "Flamesure", a flame retardant grade cloth, is defined as being suitable for construction applications, excluding flooring and linear pipe thermal insulation.

2.2 Product description

The product, "Flamesure", is fully described below and in the test reports provided in support of classification listed in Clause 3.1.

General description		Fire Retardant grade cloth
Product reference of overall composite		"Flamesure"
Name of manufacturer of overall composite		EasyFLEX Roofing ApS
Thickness of overall composite		0.22mm (**Stated by Sponsor**) 0.28mm (**Determined by WarringtonFire**)
Weight per unit area of overall composite		230g/m² (**Determined by WarringtonFire**)
Coating (Test face)	Generic type	Vermicullite based coating
	Product reference	"XFR50"
	Name of manufacturer	**See Note 1 Below**
	Colour reference	"Pale Brown"
	Application rate	**See Note 2 Below**
	Application thickness	**See Note 2 Below**
	Specific gravity	**See Note 3 Below**
	Application method	Stenter coating
	Curing process per coat	Force air drying through oven
	Trade name of flame retardant	**See Note 1 Below**
	Generic type of flame retardant	Vermicullite
	Amount of flame retardant	**See Note 2 Below**
Glass cloth	Generic type	E-Type woven fibre Glass
	Product reference	**See Note 2 Below**
	Detailed description	**See Note 2 Below**
	Name of manufacturer	**See Note 1 Below**
	Colour reference	"White"
	Thickness	0.20mm
	Density	**See Note 3 Below**
	Flame retardant details	**See Note 4 Below**

• **Continued on next page**

Air space details	An 80mm ventilated cavity was situated between the reverse face of the specimens and the calcium silicate substrate as defined in EN 13238:2010
Description of manufacturing process	**See Note 1 Below**

Note 1: The sponsor was unwilling to provide this information.
Note 2: The sponsor of the test has provided this information but at the specific request of the sponsor, these details have been omitted from the report and are instead held on the confidential file relating to this investigation.
Note 3: The sponsor was unable to provide this information.
Note 4: The sponsor of the test has confirmed that no flame retardant additives were utilised in the production of the product / component.

3. Test reports & test results in support of classification

3.1 Test reports

Name of Laboratory	Name of sponsor	Test reports Nos.	Test method & date
Warringtonfire	EasyFLEX Roofing ApS	WF 506330 WF 506332	EN ISO 1716: 2018
Warringtonfire		WF 506329 (Issue 2)	EN ISO 1716: 2018 Composite Summary Report
Warringtonfire		WF 506328 (Issue 3)	EN 13823: 2020

3.2 Test results

Test method & test number	Parameter	No. tests	Results	
			Continuous parameter - mean (m)	Compliance parameters
EN 13823	FIGRA $_{0.2MJ}$	3	10 W/s	-
	FIGRA $_{0.4MJ}$		7 W/s	-
	THR $_{600s}$		0.9 MJ	-
	LFS		-	Compliant
	SMOGRA		0 m^2s^2	-
	TSP_{600s}		15 m^2	-
	Fall of Flaming Droplet/Particle?		-	Compliant
	Flaming of Fallen Particle Exceeding 10s?		-	Compliant
EN ISO 1716	Coating - PCS (b)	3	0.1 MJ/m²	-
	Woven fibre glass - PCS (b)	3	0.2 MJ/m²	-
	External non-substantial – PCS (b)		0.3 MJ/m^2	-
	For the product as a whole PCS (e)	Summary result	1.1 MJ/Kg	-

Note 1: EN ISO 1716 : 2018 and EN 13501-1 : 2018 state that two or more non-substantial layers that are adjacent to each other (ie with no substantial component(s) in between the layers) are regarded as one non-substantial component when they collectively comply with the requirements for a layer being a non-substantial component. As a result of this, the coating and woven glass fibre layers have also been assessed collectively as a combined non-substantial component, and with a combined PCS (b) value of 0.3 MJ/m^2 are also deemed to be compliant.

Note 2: The product did not pass the requirements for PCS (b) at classification A1, however, the product is deemed to be compliant if in accordance with Table 1, Note c of EN 13501-1, any external non-substantial component having a PCS (c) ≤ 2.0 MJ/m², provided that the product satisfies the following criteria of EN 13823: FIGRA ≤20 W/s & LFS <edge of specimen & THR≤ 4.0MJ & S1 & d0. The product can therefore be considered to be A1 complaint.

4. Classification and field of application

4.1 Reference of classification

This classification has been carried out in accordance with clause 8 of EN 13501-1: 2018.

4.2 Classification

The product, "Flamesure", a flame retardant grade cloth, in relation to its reaction to fire behaviour is classified:

A1

The format of the reaction to fire classification for construction applications, excluding flooring and linear pipe thermal insulation is:

Reaction to fire classification: A1

4.3 Field of application

This classification is valid for the following end use applications:

i) Freestanding or in construction applications with an air gap of 80mm or greater used over any substrate with a density equal to or greater than 652.5 kg/m^3 having a minimum thickness of 9mm and a fire performance of A2-s1,d0 or better (excluding paper faced gypsum plasterboard).

This classification is also valid for the following product parameters:

Product thickness	No variation allowed
Product weight per unit area	No variation allowed
Coating thickness	No variation allowed
Coating application rate	No variation allowed
Product colour/pattern	No variation allowed
Product composition	No variation allowed
Product construction	No variation allowed
Air Gap	80mm or greater
Joints	No joints allowed

5. Limitations

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

SIGNED

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Katie Williams
Certification Engineer
Technical Department

APPROVED

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Stacey Deeming
Principal Engineer
Technical Department
on behalf of Warringtonfire