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Title:

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

Notified Body No:

0833

Product Name:

"webertherm XM FM048 – weberwall brick"

Report No:

WF 417463

Issue No:

2

Prepared for:

Saint Gobain Weber Ltd,
Maulden Road,
Dickens House,
Enterprise Way,
Flitwick,
MK45 5BY

Date:

14th August 2019

1. Introduction

This classification report defines the classification assigned to "webertherm XM FM048 – weberwall brick", a render protected external wall insulation system incorporating mineral fibre insulation, in line with the procedures given in EN 13501-1:2018.

2. Details of classified product

2.1 General

The product, "webertherm XM FM048 – weberwall brick", a render protected external wall insulation system incorporating mineral fibre insulation, is defined as being suitable for construction applications, excluding flooring and linear pipe thermal insulation.

2.2 Product description

The product, ""webertherm XM FM048 – weberwall brick", is fully described below and in the test reports provided in support of classification listed in Clause 3.1.

General description		Render protected external wall insulation system incorporating mineral fibre insulation.
Product reference		"webertherm XM FM048 – weberwall brick"
Name of manufacturer		Saint-Gobain Weber
Thickness		200mm (stated by sponsor) 200mm (determined by Warringtonfire)
Weight per unit area		46.82kg/m^2 (determined by Warringtonfire incl. substrate)
"HR001 March 2019" - Brick slip Option 1 (tested)	Generic type	Brick slip
	Product reference	"HR001 March 2019" / "weberwall brick"
	Name of manufacturer	Brickspan
	Colour reference	Any (tested as "Hampton Rural Red")
	Thickness	5mm
	Weight per unit area	5.55kg/m²
	Application method	Laid onto prepared render and pointed with weberend RBB or weberend BPM
	Curing process per coat	28 days for pointing mortar
	Flame retardant details	**See Note 1 below**
"HR001 July 2019" - Brick slip Option 2	Generic type	Acrylic polymer brick slips
	Product reference	"HR001 July 2019" / "Control"
	Name of manufacturer	Brickspan
	Colour reference	Any
	Thickness	5mm
	Weight per unit area	5.55kg/m²
	Application method	Laid onto prepared render and pointed
	Curing process per coat	28 days for pointing mortar
	Flame retardant details	**See Note 1 below**

"HR002 December 2019" – Brick Slip Option 3	Generic type	Brick slip
	Product reference	"HR002 December 2019" / "Combination of polymers in shade mix"
	Name of manufacturer	Brickspan
	Colour reference	Any
	Thickness	5mm
	Weight per unit area	5.55kg/m²
	Application method	Laid onto prepared render and pointed with weberend RBB or weberend BPM
	Curing process per coat	28 days for pointing mortar
	Flame retardant details	**See Note 1 below**
Pointing mortar	Generic type	Polymer modified cementitious top coat render
	Product reference	"weberend RBB (used as pointing mortar)"
	Name of manufacturer	Saint-Gobain Weber
	Colour reference	"Slate"
	Number of coats	One
	Thickness	5mm
	Application rate	0.83 kg/m²
	Application method	Mixed with the appropriate quantity of clean potable water and applied using into the joints using a pointing gun or 'conical plastic bag ('icing bag')
	Curing process per coat	28 days
	Flame retardant details	**See Note 1 below**
Render	Generic type	Polymer modified cementitious adhesive render
	Product reference	"weberend LAC Rapid"
	Name of manufacturer	Saint-Gobain Weber
	Colour reference	"Pale grey, un-pigmented"
	Number of coats	One
	Thickness	3mm
	Application rate	3.25kg/m²
	Application method	Mixed with the appropriate quantity of clean potable water and applied by hand with a metal trowel
	Curing process per coat	28 days
	Flame retardant details	**See Note 1 below**
Reinforcing mesh	Generic type	Glass fibre mesh cloth
	Product reference	"weber mesh standard"
	Name of manufacturer	Saint-Gobain ADFORS
	Number of layers	One
	Thickness	0.52mm
	Weight per unit area	160g/m²
	Application method	Laid over the first pass of render and laid in with a steel trowel
	Flame retardant details	**See Note 1 below**

Render	Generic type	Polymer modified cementitious adhesive render.
	Product reference	“weberend LAC”
	Name of manufacturer	Saint-Gobain Weber
	Colour reference	“Grey, un-pigmented”
	Number of coats	One
	Thickness	3mm
	Application rate	3.25kg/m²
	Application method	Mixed with the appropriate quantity of clean potable water and applied by hand with a metal trowel and combed with a notched trowel
	Curing process per coat	28 days
	Flame retardant details	**See Note 1 below**
Insulation	Generic type	Mineral fibre insulation
	Product reference	“webertherm MFD”
	Name of manufacturer	Rockwool
	Thickness	180mm
	Weight per unit area	18.9kg/m²
	Density	1st 15mm 160kg/m³ Balance 100kg/m³
	Colour reference	“Natural (brown)”
	Flame retardant details	**See Note 1 below**
Fixings	Generic type	Screw with washer for panel substrate.
	Product reference	“Self-drilling carbon tipped screw with isolating washer”
	Name of manufacturer	Ejot
Substrate	Generic type	Non flame retardant grade plywood which complied BS EN 13238: 2010
	Product reference	“Plywood”
	Name of manufacturer	Wisa
	Thickness	9mm
	Density	450kg/m³
Brief description of manufacturing process		Insulation is fixed to the plywood substrate with self-drilling screws and washers to the appropriate pattern. 3mm weberend is applied and the reinforcing mesh laid in. A further 3mm pass of weberend LAC applied and combed with a notched trowel. The weberwall brick is laid onto the surface of the render and tamped down, cur pieces as required are installed. The panel is left for a minimum of 24 hours prior to pointing with weberend RBB or weberend BPM.

Note 1: The sponsor of the test has confirmed that no flame retardant additives were utilised in the production of the 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
Warringtonfire	Saint Gobain Weber Ltd	WF 414084, WF 412823, WF 412822, WF 412826, WF 414099, WF 423031, WF 423033	EN ISO 1716:2010
Warringtonfire	Saint Gobain Weber Ltd	WF 415892	EN ISO 1716:2018 Composite report
Warringtonfire	Saint Gobain Weber Ltd	WF 412244, WF 418688 (full) WF 422216, WF 422217 (indicative)	BS EN 13823:2010+A1:2014
Warringtonfire	Saint Gobain Weber Ltd	WF 428357	EN 15117:2005 EN 15725:2010

3.2 Test results

Test method & test number	Parameter	No. tests	Results	
			Continuous parameter - Max/Mean (m)	Compliance parameters
BS EN 13823 webertherm XM FM048 – weberwall brick"	$FIGRA_{0.2MJ}$	3	22.63 W/s	-
	$FIGRA_{0.4MJ}$		22.63 W/S	-
	THR_{600s}		2.60 MJ	-
	SMOGRA		0.78 m^2s^2	-
	TSP_{600s}		31.49 m^2	-
	Lateral Flame Spread to End of Specimen?		-	Compliant
	Fall of Flaming Drop/Particle?		-	Compliant
	Flaming of Fallen Particle Exceeding 10s?		-	Compliant
EN ISO 1716 – Brick Slip Types *	"HR001 March 2019" - Brick Slip Option 1	3	1.2328 MJ/kg	-
	"HR001 July 2019" - Brick Slip Option 2		1.0097 MJ/kg	-
	"HR002 December 2019" - Brick Slip Option 3		1.0201 MJ/kg	-

EN ISO 1716 webertherm XM FM048 – weberwall brick"	Top Coat - PCS (a) (substantial layer of non/homogeneous product)	3	1.2328 MJ/kg	-
	Pointing Mortar - PCS (a) (internal non-substantial for non-homogeneous)		0.0000 MJ/kg	-
	Render - PCS (a) (substantial layer of non/homogeneous product)		0.6619 MJ/kg	-
	Reinforcing Mesh – PCS (d) (internal non-substantial for non-homogeneous)		1.1224 MJ/m^2	-
	Insulation – PCS (a) (substantial layer of non/homogeneous product)		0.9932 MJ/kg	-
	For the product as a whole – PCS (e)	N/a	0.9718 MJ/kg	-
BS EN 13823 "webertherm XM PM248" Brick Slip Colour Assessment**	FIGRA $_{0.2MJ}$	3 (H.Red) 1 (Buff) 1 (Black)	22.35 W/s (H.Red)	-
			20.78 W/s (Buff)	
			13.53 W/s (Black)	
	FIGRA $_{0.4MJ}$		22.35 W/S (H.Red)	-
			20.78 W/S (Buff)	
			13.53 W/S (Black)	
	THR $_{600s}$		2.60 MJ (H.Red)	-
			2.09 MJ (Buff)	
			1.84 MJ (Black)	
	LFS		-	Compliant
	SMOGRA		2.57 m^2s^2 (H.Red)	-
			1.49 m^2s^2 (Buff)	
			0.00 m^2s^2 (Black)	
	TSP_{600s}		41.73 m^2 (H.Red)	-
			27.19 m^2 (Buff)	
			18.90 m^2 (Black)	
	Fall of Flaming Drop/Particle?		-	Compliant
	Flaming droplets lasting > 10s		-	Compliant

*** Brick Slip Type -** Three EN ISO 1716 tests were conducted on the three brick slip options initially to determine the worst performer. This was found to be the "HR001 March 2019". The BS EN 13823 test on the "webertherm XM FM048-weberwall brick" was therefore conducted on the "HR001 March 2019". The alternative brick slip options when applied to the "webertherm XM FM048-weberwall brick" product can therefore be deemed not to have a negative impact on the fire performance of the product.

**** Brick Slip Colour** – The BS EN 13823 testing was conducted on the "webertherm XM FM048 – weberwall brick" product with the "Hampton Rural Red" colour only. This is because the "Hampton Rural Red" colour had previously been identified as the worst performing colour of Brick Slip Option 1 by testing on a similar render faced product, "webertherm XM PM248/KM248", with identical brick slip facings as per WF 418688, WF 422216 and 422217. Variation in the colour of the Brick Slips is not considered to have any effect on the fire performance of the "webertherm XM FM048 – weberwall brick" product.

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, EN 15725:2010 and EN/TS 15117:2005.

4.2 Classification

The product, “webertherm XM FM048 – weberwall brick”, a render protected external wall insulation system incorporating mineral fibre insulation, 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

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

Fire Behaviour		Smoke Production			Flaming Droplets	
A2	-	s	1	,	d	0

i.e. A2 – s1 , d0

Reaction to fire classification: A2- s1, d0

4.3 Field of application

This classification is valid for the following end use applications:

i) Air gap details – No air gap allowed
ii) Construction applications applied over any substrate with a minimum density of 450kg/m^3, having a minimum thickness of 9mm and a fire performance of D-s2,d0 or better

This classification is also valid for the following product parameters:

Brick Slip colour	Any
Brick Slip type	Options 1 OR 2 OR 3 **as described only**
Pointing mortar type	Identical type with equal or less organic content allowed
Render type	Identical type with equal or less organic content allowed
Reinforcing Mesh type	Tested type and those with lower PCS (MJ/m^2) values allowed
Render & Pointing mortar application rate	Tested values (kg/m^2) or below allowed
Insulation type	Identical type with equal or less organic content allowed
Insulation thickness	180mm and above allowed
Insulation density	Tested value or below allowed
Product composition	No further variation allowed
Product construction	No further variation allowed
Air gap details	No air gap allowed
Mounting and Fixing details	Mechanical fixings only allowed Supplementary “weberend LAC” or “weberend LAC Rapid” render may be used **in addition to** the mechanical fixings as described

5. Limitations

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

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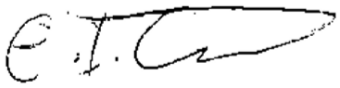

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Euan Gardner
Certification Engineer
Technical Department

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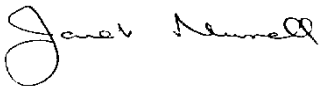

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Janet Murrell
Technical Manager
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on behalf of Warringtonfire

Issue 2: Change to F.O.A at reqest of sponsor. E Gardner. 15th May 2020