

Title:

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

Product Name:

"Dura Cladding Flush
Aluminium"

Report No:

WF 502439

Issue No:

1

Prepared for:

Dura Composites Ltd
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Date:

20th May 2021

1. Introduction

This classification report defines the classification assigned to “Dura Cladding Flush Aluminium”, a family of powder coated aluminium cladding products, in line with the procedures given in EN 13501-1:2018.

2. Details of classified product

2.1 General

The products, “Dura Cladding Flush Aluminium”, a family of powder coated aluminium cladding products, are defined as being suitable for construction applications, excluding flooring and linear pipe thermal insulation.

2.2 Product description

The products, “Dura Cladding Flush Aluminium”, a family of powder coated aluminium cladding products, are fully described below and in the test reports provided in support of classification listed in Clause 3.1.

General description	Powder coated aluminium cladding	
Product reference	“Dura Cladding Flush Aluminium”	
Name of manufacturer	Dura Composites Ltd	
Overall thickness including profile	11mm (stated by sponsor) 13mm (determined by Warringtonfire)	
Weight per unit length	1.18kg/lm (stated by sponsor)	
Overall weight per unit area	7.86kg/m ² (stated by sponsor)	
Final coating product (Test face)	Generic type	Powder coating
	Product reference	“Interpon 810 Series”
	Name of manufacturer	Akzo Nobel Powder Coatings
	Colour reference	“RAL 1019” Cedar (tested) “RAL 7001” Mist (tested) “RAL 7043” Anthracite (tested) “RAL 8014” Sepia Brown “RAL 7006” Beige Grey “RAL 7016” Anthracite Grey “RAL 7037” Dusty Grey “RAL 8003” Clay Brown “RAL 8017” Chocolate Brown “RAL 8019” Grey Brown
	Number of coats	One
	Thickness	60-80 microns
	Application rate	167 g/m ²
	Specific gravity	1.2-1.7
	Application method	Electrostatically applied
	Flame retardant details	See Note 1 below
	Curing process	Heated to 180 °C

Aluminium	Generic type	Aluminium Extrusion
	Product reference	"6063 T6"
	Name of manufacturer	Dura Composites Ltd
	Thickness	2mm aluminium (11mm thick including profile)
	Weight per unit length	1.18kg/lm
	Flame retardant details	See Note 1 below
Orientation	<u>WF 501341, WF 501343, WF 501344, WF 501345</u> Vertical <u>WF 501342</u> Horizontal	
Mounting and fixing details	<u>WF 501341, WF 501342, WF 501343, WF 501344</u> A 25mm aluminium batten was butted up against the reverse face creating a 25mm ventilated cavity between the reverse face of the specimens and the calcium silicate substrate as defined in EN 13238:2010 <u>WF 501345</u> A 75mm aluminium batten was butted up against the reverse face creating a 75mm ventilated cavity between the reverse face of the specimens and the calcium silicate substrate as defined in EN 13238:2010	
Brief description of manufacturing process	Aluminium is extruded from raw material into a profile, then coated with powder coat paint by spray guns	

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	Dura Composites Ltd	WF 501341	BS EN 13823:2020
Warringtonfire	Dura Composites Ltd	WF 501342 WF 501343 WF 501344 WF 501345	BS EN 13823:2020 Indicative
Warringtonfire	Dura Composites Ltd	WF 501337 WF 501338 WF 501339	EN ISO 1716:2018
Warringtonfire	Dura Composites Ltd	WF 501340	EN ISO 1716:2018 Composite Report
Warringtonfire	Dura Composites Ltd	WF 502440	EN/TS 15117:2005 EN 15725:2010

3.2 Test results

Test method & test number	Parameter	No. tests	Results	
			Continuous parameter - Max/ Mean (m)	Compliance with parameters
BS EN 13823	FIGRA _{0.2MJ}	3	0 W/s (501341-Vertical-25mm-Cedar)	-
		1	0 W/s (501342- Horizontal-25mm-Cedar)	-
		1	0 W/s (501343-Vertical-25mm-Mist)	-
		1	0 W/s (501344- Vertical-25mm-Anthracite)	-
		1	0 W/s (501345-Vertical-75mm-Cedar)	-
	FIGRA _{0.4MJ}	3	0 W/S (501341-Vertical-25mm-Cedar)	-
		1	0 W/S (501342- Horizontal-25mm- Cedar)	-
		1	0 W/S (501343-Vertical-25mm - Mist)	-
		1	0 W/S (501344- Vertical-25mm-Anthracite)	-
		1	0 W/S (501345- Vertical-75mm-Cedar)	-
	THR _{600s}	3	0.8 MJ (501341-Vertical-25mm-Cedar)	-
		1	0.6 MJ (501342- Horizontal-25mm- Cedar)	-
		1	0.6 MJ (501343- Vertical-25mm- Mist)	-
		1	0.6 MJ (501344- Vertical-25mm - Anthracite)	-
		1	0.4 MJ (501345- Vertical-75mm-Cedar)	-
	SMOGRA	3	1 m ² s ² (501341-Vertical-25mm-Cedar)	-
		1	0 m ² s ² (501342- Horizontal-25mm-Cedar)	-
		1	0 m ² s ² (501343- Vertical-25mm-Mist)	-
		1	0 m ² s ² (501344- Vertical-25mm -Anthracite)	-
		1	0 m ² s ² (501345- Vertical-75mm-Cedar)	-

	TSP _{600s}	3	29 m ² (501341-Vertical-25mm-Cedar)	-
		1	21 m ² (501342- Horizontal-25mm-Cedar)	-
		1	21 m ² (501343-Vertical-25mm-Mist)	-
		1	33 m ² (501344- Vertical-25mm-Anthracite)	-
		1	17 m ² (501345- Vertical-75mm-Cedar)	-
	Lateral Flame Spread to End of Specimen?	3 (full) 1 (indic)	-	Compliant
	Fall of Flaming Drop/Particle?		-	Compliant
Flaming of Fallen Particle Exceeding 10s?	-		Compliant	
EN ISO 1716	Coating - PCS (b)	3	3.5 MJ/m ² (Cedar)	-
			3.5 MJ/m ² (Mist)	-
			3.4 MJ/m ² (Anthracite)	-
	Aluminium – PCS (a)	Deemed to Satisfy (0.0 MJ/kg)		-
For the product as a whole – PCS (e)	N/a	0.4 MJ/kg	-	

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 products, "Dura Cladding Flush Aluminium", a family of powder coated aluminium claddings, in relation to their reaction to fire behaviour are 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) Construction applications applied over any substrate with a minimum density of 820kg/m^3 , having a minimum thickness of 9mm and a fire performance of A2-s1,d0 or better with the exception of EN 13238 standardised Gypsum plasterboard
- ii) Air gap details – 25mm – 75mm allowed between reverse face of specimen and the substrate
- iii) Mounted using aluminium battens of 25mm to 75mm thickness

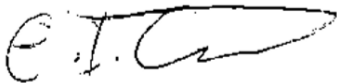
This classification is also valid for the following product parameters:

Coating colour	Any colour as listed. No further variation allowed
Orientation	Any orientation allowed
Product composition	No variation allowed
Product construction	No variation allowed
Air gap details	25mm-75mm allowed
Mounting and Fixing details	Mounted to substrate using Aluminium battens with a depth of 25mm to 75mm

5. Limitations

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

SIGNED



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Euan Gardner
Certification Engineer
Technical Department

APPROVED



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Stacey Deeming
Principal Engineer
Technical Department
On behalf of **Warringtonfire**

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