

System Laboratories UK LTD
Classification Report
Classification of reaction to fire
performance of construction products and
building elements in accordance with BS
EN 13501-1:2018

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Issue C
Prepared for The Millboard Company Ltd.
Date 27/11/2023

Issue	Date	Notes
A	31/10/2023	First issue
B	06/11/2023	Change to specimen description
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Contents

1.	Introduction	4
2.	Details of classified product	5
2.1.	General	5
2.2.	Traceability	5
2.3.	Sample details	5
2.4.	Detailed product description	6
3.	Reports and results in support of this classification	8
3.1.	Reports	8
3.2.	Results	9
4.	Classification and field of application	10
4.1.	Reference of classification	10
4.2.	Classification	10
4.3.	Field of application	10
5.	Limitations	10
6.	References	11

1. Introduction

This classification report defines the classification assigned to Shadow Line+ Cladding incorporating Envello Décor, in accordance with the procedures given in BS EN 13501-1: 2018.

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

Sponsor: The Millboard Company Ltd.
Prepared for: The Millboard Company Ltd.
Place of manufacture: Ryton Lodge, Oxford Road, Coventry, CV8 3EJ, UK

CAB Number: N/A
Classification report No.: 482-C
Date of issue: 27/11/2023

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2. Details of classified product

2.1. General

Classification according to BS EN 13501-1:2018 of Shadow Line+ Cladding incorporating Envello Décor.

2.2. Traceability

The test sample was supplied by the sponsor. System Laboratories UK LTD was not involved in the sampling process and therefore cannot comment upon the relationship between the samples supplied for the test and the products supplied to the market.

2.3. Sample details

Test sponsor	The Millboard Company Ltd. Unit A Castle Court Bodmin Road Coventry CV2 5DB UK
Place of manufacture	The Millboard Company Ltd. Ryton Lodge Oxford Road Coventry CV8 3E, UK
Trade name	Shadow Line+ Cladding incorporating Envello Décor
Sample description (as provided by sponsor)	Millboard Shadow Line+ cladding incorporating Envello Décor, fixed to treated timber battens with Millboard Corner Profiles and aluminium trims
	Product data (as provided by sponsor)
Generic type of product	Composite cladding made with recycled natural minerals blended in a polymer resin with long fibre reinforcement
Nominal thickness (mm)	18
Density of core (kg/m ³)	530 ± 7 %
Mass per unit area (kg/m ²)	12.7
Colour	Limed Oak (White)
Test face	2K Coated fire rated elastomeric surface layer

Flame retardant added, or N/A
 organic content limited
 during production

Substrate and ventilation conditioned

Substrate N/A
 Type of air gap N/A

2.4. Detailed product description

The product is configured as detailed below, front to back.

Cladding	Type of product/layer	Shadow Line+ Cladding board
	Product/layer reference	Profiled cladding board made from a coating which is a UV stable 2K coated elastomer layer and a core that is a blend of natural minerals bonded in a polymer resin, with long fibre reinforcement
	Thickness	18mm (provided by sponsor)
	Colour	Limed Oak
	Construction form	Fixed through the tongue and board face to treated battens
Décor	Type of product/layer	Envello Décor trim
	Product/layer reference	Profiled decorative anodised aluminum trims used between the cladding boards
	Thickness	16mm
	Colour	Various
	Construction form	Fixed through fixing flange to treated battens
Corner Profile	Type of product/layer	Shadow Line+ Corner Profile
	Product/layer reference	Profiled Corner Profile made from a UV stable 2K coated flexible polymer
	Dimensions	50x50x3050mm (provided by sponsor)
	Colour	Limed Oak
	Construction form	Fixed with perforated closure and accessories fixings

Aluminium Trims	Type of product/layer	Envello Aluminium Trims
	Product/layer reference	Aluminium Perforated Closures, located at the bottom and top of cladding area to allow ventilation behind the boards
	Dimensions	50x25mm (provided by sponsor)
	Colour	Mill colour
	Construction form	Fixed with accessories fixings
Timber Battens	Type of product/layer	Treated Timber Battens
	Product/layer reference	Treated timber battens at max 600mm centres
	Dimensions	50x25mm (provided by sponsor)
	Colour	Timber Colour
	Construction form	Fixed to wall framing with external grade fixings
Breather Membrane	Type of product/layer	Breather Membrane
	Product/layer reference	Vapour permeable underlay
	Thickness	0.7mm (provided by sponsor)
	Colour	Multicoloured
	Construction form	Stapled to sheathing board
Sheathing Board	Type of product/layer	Sheathing Board
	Product/layer reference	OSB sheathing board
	Thickness	12mm (provided by sponsor)
	Colour	Timber Colour
	Construction form	Fixed to wall framing
Joint details		Horizontal and vertical joints
Orientation of planks		Horizontal or vertical orientation only

3. Reports and results in support of this classification

3.1. Reports

Name of laboratory	Name of test sponsor	Test report No.	Test method/field of application
System Laboratories UK	The Millboard Company Ltd.	311A	BS EN ISO 11925-2:2020
System Laboratories UK	The Millboard Company Ltd.	470A	BS EN 13823:2020

3.2. Results

Standard/Decision	Parameter	Number of tests	Results	
			Continuous parameter mean	Compliance with class
BS EN 13823:2020	FIGRA _{0,4}	3	154.7 W/s	≤ 250 W/s
				Compliant
BS EN 13823:2020	THR ₆₀₀	3	13.7 MJ	≤ 15 MJ
				Compliant
BS EN 13823:2020	LFS	3	No spread to edge	No spread to edge
				Compliant
BS EN 13823:2020	SMOGRA	3	72.57 m ² /s ²	≤ 180 m ² /s ²
				Compliant
BS EN 13823:2020	TSP ₆₀₀	3	342.6 m ²	> 200 m ²
				Compliant
BS EN 13823:2020	Flaming Droplets	3	No flaming droplets	No flaming droplets
				Compliant
BS EN ISO 11925-2:2020	F _s	6,6,6	F _s ≤ 150 mm within 60s	F _s ≤ 150 mm within 60s
				Compliant

4. Classification and field of application

4.1. Reference of classification

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

4.2. Classification

The product Shadow Line+ Cladding incorporating Envello Décor, in relation to reaction to fire behaviour is classified:

Fire behaviour Smoke production Flaming droplets
 C - s 3 , d 0

Reaction to fire classification:	C-s3,d0
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4.3. Field of application

This classification is valid for the following product and mounting and fixing parameters:

Thickness	No variation allowed
Colour	Limed Oak (White)
Composition/build up	No variation allowed
Density of core	No variation allowed
Mass per unit area	± 10 % of tested value

5. Limitations

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

The laboratory has played no part in sampling of the product.

6. References

BS EN 13501-1:2018 - Fire classification of construction products and building elements

BS EN ISO 11925-2:2020 - Reaction to fire tests. Ignitability of products subjected to direct impingement of flame - Single-flame source test

BS EN 13823:2020 - Reaction to fire tests for building products. Building products excluding floorings exposed to the thermal attack by a single burning item

-End of Report-