

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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Prepared for Ryno Ltd.
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Issue	Date	Notes
A	13/03/2023	First issue
B	16/03/2023	Addition of total PCS per product
C	20/03/2023	Correction of classification
D	22/03/2023	Correction of PCS performance

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1. Introduction

This classification report defines the classification assigned to Ryno Aluminium Decking Board, 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:	Ryno Ltd.
Prepared for:	Ryno Ltd.
Place of manufacture:	Ryno Ltd., Castlepoint, Castle Way, Ellon AB41 9RG, UK
CAB Number:	N/A
Classification report No.:	226-D
Date of issue	22/03/2023

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2. Details of classified product

2.1. General

Classification according to BS EN 13501-1:2018 of Ryno Aluminium Decking Board.

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	Ryno Ltd. Castlepoint Castle Way Ellon AB41 9RG UK
Place of manufacture	As above
Trade name	Ryno Aluminium Decking Board
Sample description (as provided by sponsor)	Ryno Aluminium Decking including substructure & pedestals
Product data (as provided by sponsor)	
Generic type of product	PPC Aluminium Decking Board
Nominal thickness (mm)	20-40
Density of core (kg/m ³)	1210-1470 (PPC)
Mass per unit area (kg/m ²)	36.3 (Calculated by laboratory - full product)
Colour	Black, Red, White
Test face	Painted front

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

Substrate and ventilation conditioned

Substrate N/A
 Type of air gap 40mm

2.4. Detailed product description

The product is configured as detailed below, front to back

Paint	Type of product/layer	PPC
	Product/layer reference	PPC
	Thickness	0.104-0.136mm (calculated by laboratory)
	Colour	RAL 9005HR/RAL 3020/ RAL 9010HR
	Construction form	Paint coat
Aluminium decking	Type of product/layer	Aluminium decks
	Product/layer reference	Aluminium decking
	Thickness	20-40mm
	Colour	Metallic
	Construction form	Aluminium extruded joists fixed to steel pedestals
Steel pedestals	Type of product/layer	Steel pedestals
	Product/layer reference	Pedestals
	Thickness	3mm
	Colour	Metallic
	Construction form	Steel pedestals

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	Ryno Ltd.	225A	BS EN 13823:2020
System Laboratories UK	Ryno Ltd.	222B	BS EN ISO 1716:2018
System Laboratories UK	Ryno Ltd.	223B	BS EN ISO 1716:2018
System Laboratories UK	Ryno Ltd.	224B	BS EN ISO 1716:2018

3 BS EN ISO 1716:2018 tests were performed on the proposed colours for extension of scope, the RAL 9005HR was selected as it showed the highest calorific value.

3.2. Results

Standard/Decision	Parameter	Number of tests	Results	
			Continuous parameter mean	Compliance with class
				A2-s1,d0
BS EN ISO 1716:2018 (b) RAL 3020 Red	PCS	3	2.565 MJ/m ²	<4.0 MJ/m ²
				Compliant
BS EN ISO 1716:2018 (b) RAL 9005HR Black	PCS	3	3.502 MJ/m ²	<4.0 MJ/m ²
				Compliant
BS EN ISO 1716:2018 (b) RAL 9010HR White	PCS	3	2.817 MJ/m ²	<4.0 MJ/m ²
				Compliant
BS EN ISO 1716:2018 (e) Product as a whole	PCS	3	0.096 MJ/kg	<3.0 MJ/kg
				Compliant
BS EN 13823:2020	FIGRA _{0.2MJ}	3	4.2 W/s	<120W/s
				Compliant
BS EN 13823:2020	THR _{600s}	3	0.5 MJ	<7.5MJ
				Compliant
BS EN 13823:2020	LFS	3	Not reached edge of specimen	Not reached
				Compliant
BS EN 13823:2020	TSP _{600s}	3	26.2 m ²	<50m ²
				Compliant
BS EN 13823:2020	SMOGR	3	0 m ² /s ²	<30m ² /s ²
				Compliant
BS EN 13823:2020	Flaming Droplets	3	No flaming droplets	No flaming droplets
				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 Ryno Aluminium Decking Board, in relation to reaction to fire behaviour is classified:

Fire behaviour		Smoke production		Flaming droplets
A2	- s	1	, d	0

Reaction to fire classification:

A2-s1,d0

4.3. Field of application

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

Thickness	No variation allowed
Colour	Black RAL 9005HR/Red RAL 3020/White RAL 9010HR
Composition/build up	No variation allowed
Mass per unit area	+/- 5% of tested value
Air gap	No limitation

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

BS EN ISO 1716:2018 – Reaction to fire tests for products — Determination of the gross heat of combustion (calorific value)

-End of Report-