

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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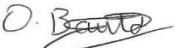
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Issue B
Prepared for BALCONETTE
Date 09/08/2023

Issue	Date	Notes
A	20/07/2023	First issue
B	09/08/2023	Corrections to client name, product data

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1. Introduction

This classification report defines the classification assigned to Balconette's Hybrid® Balustrade Systems, in accordance with the procedures given in BS EN 13501-1: 2018. Balconette Hybrid® Balustrade Systems including the systems listed below:

Hybrid® Aerofoil Balustrade
Hybrid® Orbit Balustrade
Hybrid® Aerofoil infinity (Pass through) Screen
Hybrid® Orbit Privacy Screen
Hybrid® Aerofoil Juliet
Hybrid® Orbit Juliet
Hybrid® Orbit Mirror Juliet
Hybrid® Glass Gate
SG12 Frameless System with a handrail

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

Sponsor:	BALCONETTE
Prepared for:	BALCONETTE
Place of manufacture:	Unit 6 Systems House, Eastbourne Road, Blindley Heath, Lingfield, Surrey, RH7 6JP
CAB Number:	N/A
Classification report No.:	344-B
Date of issue	09/08/2023

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2. Details of classified product

2.1. General

Classification according to BS EN 13501-1:2018 of Balconette Hybrid System.

2.2. Traceability

The report was written in accordance with 96/603/EC. 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	BALCONETTE Unit 6 Systems House Eastbourne Road Blindley Heath Lingfield Surrey RH7 6JP
Place of manufacture	As above
Trade name	Balconette's Hybrid® Balustrade Systems (Various)
Sample description (as provided by sponsor)	Balconette Hybrid® Glass Balustrade Systems for balconies/roofs/terraces.
Product data (as provided by sponsor)	
Generic type of product	Balconette Hybrid® Glass Balustrade Systems for balconies/roofs/terraces
Nominal thickness (mm)	Varies
Density of core (kg/m ³)	Varies
Mass per unit area (kg/m ²)	Varies
Colour	Varies
Test face	N/A

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.		
Aluminium	Type of product/layer	Aluminium
	Product/layer reference	Aluminium Profiles and Accessories
	Thickness	Varies
	Colour	Metallic
	Construction form	Balconette product to Balconette product are attached by mechanical fixings. (See Table 1)
Glass	Type of product/layer	Toughened Glass
	Product/layer reference	Glass
	Thickness	10 - 19mm
	Colour	Clear or tinted
	Construction form	Monolithic glass
Steel	Type of product/layer	Steel components
	Product/layer reference	Steel
	Thickness	Varies
	Colour	Metallic
	Construction form	Balconette product to Balconette product are attached by mechanical fixings. (See Table 1)

The product may incorporate various gaskets, glass fixings/wedges and shims when in compliance with Approved Document B (fire safety) volume 1: Dwellings, 2019 edition incorporating 2020 and 2022 amendments clause 10.10.iv

Table 1

HYBRID SYSTEM MATERIAL DATA SHEET		
Components	Material Specification	Thickness
Glass		
10-19mm Glass	10-19mm THICK THERMALLY TOUGHENED SODA SILICATE SAFETY GLASS	10-19mm
Aluminium		
AEROFOIL HANDRAIL + GLAZING BEAD, ORBIT HANDRAIL + GLAZING BEAD	ANODIZED EXTRUDED ALUMINIUM TYPE 6063 T5	2mm min.
BOTTOM RAIL + GLAZING BEAD	ANODIZED EXTRUDED ALUMINIUM TYPE 6063 T5	1.8 - 2mm
AEROFOIL INFINITY HNADRAIL	ANODIZED EXTRUDED ALUMINIUM TYPE 6063 T5	2mm min.
POST SLEEVES + COVER	ANODIZED EXTRUDED ALUMINIUM TYPE 6063 T5	1.7 - 2.5mm
POST CONNECTORS	EXTRUDED ALUMINIUM TYPE 6063 T5	26 - 71mm
ENDCAPS, TOP CAPS	EXTRUDED ALUMINIUM TYPE 6063 T5	4/5/6mm
MITRE PROTECTION PLATES	5005 GRADE H14 ALUMINIUM SHEET	3mm
BOTTOMRAIL CONNECTORS, ANGLE CONNECTORS	5754 GRADE H111 ALUMINIUM SHEET	11.7mm
BASEPLATE COVERS	5005 GRADE H14 ALUMINIUM SHEET	2mm
HANDRAIL CORNER BRACKET	5251 GRADE ALUMINIUM SHEET	3mm
CONCEALED WALL BRACKET	ALUMINIUM SHEET	3.74mm
GATE STRIKE PLATE	ANODIZED EXTRUDED ALUMINIUM TYPE 6063 T5	44.6mm
GATE HINGE CONNECTOR	ANODIZED EXTRUDED ALUMINIUM TYPE 6063 T5	26.6mm
SG12 BASE TRACK	EXTRUDED ALUMINIUM TYPE 6063 T6	12mm
SG12 BASE TRACK COVER	ANODIZED EXTRUDED ALUMINIUM TYPE 6063 T5	1.4mm

HYBRID SYSTEM MATERIAL DATA SHEET - continued		
Components	Material Specification	Thickness
Aluminium		
SG12 HANDRAIL	ANODIZED EXTRUDED ALUMINIUM TYPE 6063 T5	2mm
SG12 MOUNTING BLOCKS	ANODIZED EXTRUDED ALUMINIUM TYPE 6063 T5	Varies
SG12 CONNECTOR	5754 GRADE H111 ALUMINIUM SHEET	5mm
SG12 ALUMINUM SPACER 5MM	5251 GRADE ALUMINIUM SHEET	5mm
SG12 END CAP	ANODIZED EXTRUDED/CASTED ALUMINIUM TYPE 6063 T5	3mm
Steel		
60 X 24MM RHS POSTS ON 170x150 BASEPLATE	S 275 TO EN 10025 (HOT DIP GALVANIZED ACCORDING TO EN ISO 1461)	5/15mm
48.3 X 5MM CHS POSTS ON 150x150 BASEPLATE	S 275 TO EN 10025 (HOT DIP GALVANIZED ACCORDING TO EN ISO 1461)	5/15mm
60 X 60 X 5MM SHS POSTS	S355 H TO EN 10210-1 (HOT DIP GALVANIZED ACCORDING TO EN ISO 1461)	5/15mm
60.3 X 5MM CHS POSTS	S 355 TO EN 10025 (HOT DIP GALVANIZED ACCORDING TO EN ISO 1461)	5/15mm
WALL BRACKET	STAINLESS STEEL GRADE 304, STAINLESS STEEL GRADE 316	3mm
SCREWS	STAINLESS STEEL - GRADE A2	Varies
GATE ACCESSORIES	STAINLESS STEEL	Varies

3. Reports and results in support of this classification

3.1. Reports

Testing was not needed due to the three main components automatically achieving an A1 due to 96/603/EC - Materials to be considered as reaction to fire Classes A1 and A1_{fl} as provided for in Decision 2000/147/EC without the need for testing - Glass/Aluminium (Not in finely divided form)/Steel (Not in finely divided form).

3.2. Results

Standard/Decision	Parameter	Number of tests	Results	
			Continuous parameter mean	Compliance with class
				A1
96/603/EC Glass		N/A		Compliant
96/603/EC Aluminium		N/A		Compliant
96/603/EC Steel		N/A		Compliant

Testing and results are not required as stated on page 9.

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 “Balconette Hybrid® Glass Balustrade Systems”, in relation to reaction to fire behaviour is classified:

Fire behaviour	Smoke production	Flaming droplets
A1	s	d

Reaction to fire classification:

A1

4.3. Field of application

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

Thickness	Any
Colour	Metallic, clear & tinted glass
Composition	No variation allowed
Mass Per Unit Area	Any

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

96/603/EC - establishing the list of products belonging to Classes A 'No contribution to fire' provided for in Decision 94/611/EC implementing Article 20 of Council Directive 89/106/EEC on construction products
Approved Document B (fire safety) volume 1: Dwellings, 2019 edition incorporating 2020 and 2022 amendments

-End of Report-