

Combined Fire Classification Evidence Pack – BalcoDeck®

1. Introduction

This document consolidates the fire classification evidence for BalcoDeck® - the Aluminium decking system and the associated Balustrade systems (Aerofoil, Orbit, Orbit Privacy, Aerofoil Infinity, SG12, Milano, Aerofoil Juliet and Orbit Juliet, frameless Juliet and Glass gate).

The purpose of this pack is to provide a single, comprehensive source of fire-classification documentation for use by Building Control bodies, Warranty providers, Approved Inspectors, Principal Designers and Principal Contractor.

The evidence presented demonstrates that all primary components used within BalcoDeck® systems meet the required levels of non-combustibility or limited combustibility for balcony and terrace applications under current UK regulations.

2. System Overview

This evidence pack covers the following systems:

- BalcoDeck® Aluminium Decking System
- Aerofoil Balustrade System
- Orbit Balustrade System
- Aerofoil Infinity Balustrade System
- Orbit Privacy Balustrade System
- SG12 Structural Glass Balustrade System
- Milano Systems
- Aerofoil Juliet
- Orbit Juliet
- Frameless Juliet
- Glass Gate

The fire performance of BalcoDeck® systems has been evaluated against the following standards:

EN 13501-1 – Fire Classification of Construction Products: This is the primary European classification system used to assess combustibility, smoke generation, and flaming droplets. Classes relevant to these systems include A1 – Non-combustible, A2-s1,d0 – Limited combustibility, minimal smoke, no flaming droplets.

EU Decision 96/603/EC: Defines products automatically classified as A1, including non-coated and powder-coated aluminium and monolithic glass.

EN 12150-2 & EN 14449: Applicable to safety glass used in balustrades (toughened and laminated).

BS 7976-2: Slip resistance classification for coated aluminium deck boards.

UK Building Regulations (Approved Document B): Requirements for balconies, terraces, and external wall elements in relevant buildings, including 11m+ buildings and high-risk residential scenarios.

3. Glass Fire Classification Evidence

All glass used within the BalcoDeck® system is toughened glass tested in accordance with the relevant European standards. Laminated glass types are certified as **A2-s1,d0**. The monolithic safety glass types are classified as **A1 non-combustible** in accordance with **EN 13501-1** and **EU Decision 96/603/EC**, which automatically assigns A1 to inorganic, non-combustible glass products.

Certification for laminated toughened glass is provided below. Evidence is **not required** for monolithic A1 glass types, as they are inherently non-combustible and covered by the A1 exemption.

1. 10 mm Monolithic Toughened Glass

| | |
|---------------------------|--------------------------------------|
| Construction | : Single toughened safety glass pane |
| Thickness | : 10 mm |
| EN 13501-1 Classification | : A1 (non-combustible) |

2. 12 mm Monolithic Toughened Glass

| | |
|---------------------------|--------------------------------------|
| Construction | : Single toughened safety glass pane |
| Thickness | : 12 mm |
| EN 13501-1 Classification | : A1 (non-combustible) |

3. Pyroguard T-EW / 11.5 mm

| | |
|---------------------------|----------------------------------|
| Construction | : Laminated, thermally toughened |
| Thickness | : 11.5 mm |
| EN 13501-1 Classification | : A2-s1,d0 |

4. Pyroguard T-EW / 21.5 mm

| | |
|---------------------------|--|
| Construction | : Multi-layer laminated, thermally toughened |
| Thickness | : 21.5 mm |
| EN 13501-1 Classification | : A2-s1,d0 |

5. Pyroguard T-EW / 25.5 mm

| | |
|---------------------------|----------------------------------|
| Construction | : Laminated, thermally toughened |
| Thickness | : 25.5 mm |
| EN 13501-1 Classification | : A2-s1,d0 |

Refer below links to view,

The declaration of Performance of T-EW/11.5 –

https://www.balconette.co.uk/content/uploads/a72ced90-8d4d-4a41-99f6-695b42c1fa81/dop_en_203-t-ew-11.5.pdf

The declaration of Performance of T-EW/21.5 –

https://www.balconette.co.uk/content/uploads/3aa0db58-21b4-4405-9399-b6f448cd2451/dop_en_206-t-ew-21.5.pdf

The declaration of Performance of T-EW/25.5 –

https://www.balconette.co.uk/content/uploads/537abede-d281-4ea5-8b14-4d969992c6fe/dop_en_208-t-ew-25.5.pdf

The Pyroguard - Fire Classification report –

<https://www.balconette.co.uk/content/uploads/db63036f-6f7d-4425-9b66-e0537e9f2e2a/19-19491-1009-2-m6-pyroguard.pdf>

4. Aluminium Component Evidence and Powder Coating Evidence

All aluminium components used within the system—including deck boards, joist profiles, adjustable pedestal profiles, post sleeves, handrails, bottom tracks, glazing beads, gate parts are manufactured from **EN AW-6060 T6** or **EN AW-6063 T6** architectural-grade aluminium alloys.

These alloys are classified as Euroclass **A1 non-combustible** in accordance with EU Decision **96/603/EC**, meaning they do not contribute to fire growth or spread under EN 13501-1.

Powder Coating System:

The aluminium components are finished using Interpon D2525 Texture ISR, a super-durable architectural polyester powder coating designed for external, high-UV environments.

Powder Type : Interpon D2525 Texture ISR (Super Durable Polyester)

Fire Classification of Coating : **A2-s1,d0**

Durability Classification : Qualicoat Class 2

Technical Datasheet of Interpon D2525 Texture ISR (Super Durable Polyester) are available in below link:

https://www.balconette.co.uk/content/uploads/217e202f-0550-4204-b11e-3ef7b7a8c449/emea_tds_interpon-d2525-texture-isr_v5_en.pdf

Refer below link to view the Alloy data sheet of EN AW-6060 T6 AND EN AW-6063:

<https://www.balconette.co.uk/content/uploads/97bdd6ba-476b-452f-9087-42ea8041fca2/aluminium-alloy-6060-and-aluminium-alloy-6063---material-datasheet.pdf>

5. Steel Components evidence (A1)

All steel components incorporated within the BalcoDeck® decking and balustrade systems:

- Are manufactured from **A1-classified metallic materials**
- Contain **>99% metallic content** (see below ISO 3506 Composition Datasheet)
- Comply with EU Decision 96/603/EC (A1 classification of metals)
- Do not require additional fire testing or certificates under EN 13501-1
- Are fully compliant with the fire-safety requirements of Approved Document B for materials used in external balcony and balustrade systems

Refer below link to view the ISO 3506 composition data sheet:

https://www.balconette.co.uk/content/uploads/16778afe-3c18-48d5-a5ec-43adde210c9c/fastners-datasheet_iso-3506-1_2020_.pdf

6. Fasteners (A1)

All A2 Stainless Steel (AISI 304 Equivalent) and A4 Stainless Steel (AISI 316 Equivalent – Marine Grade) fasteners used in the system are manufactured in accordance with ISO 3506-1/3506-2. These alloys consist of more than 99% metallic content (Fe, Cr, Ni, Mo) and contain no organic or combustible compounds. Under EN 13501-1 and EU Decision 96/603/EC (A1 classification of metallic materials), stainless-steel fasteners are inherently classified as **A1 non-combustible** and do not require further fire testing.

7. Ancillary Components (Exempted)

The gaskets, packers, fixings, sealants, pads are ancillary components used within the BalcoDeck® system and associated balustrade/Juliet systems, fall squarely within the permitted exemptions of Approved Document B (Fire Safety). These elements are present only in minimal quantities, serve essential functional purposes (such as isolation, spacing, drainage and tolerance adjustment), and are not part of any load-bearing or primary structural element.

As such, they do not require independent fire-classification evidence and are fully compliant with the allowances set out in Approved Document B for ancillary components within balcony and external wall systems.

8. Combined Component Classification Summary of BalcoDeck®

| Component | Application | Evidence Provided | Classification |
|---|--------------------------|--|----------------|
| Aluminium Deck Boards, Joists, Pedestals, Accessories | Decking | EN AW-6060 / 6063 alloy datasheet; EU Decision 96/603/EC | A1 |
| Aluminium Balustrade Profiles and Accessories | Balustrades | EN AW-6060 / 6063 alloy datasheet; EU Decision 96/603/EC | A1 |
| Steel Components (Brackets, steel posts, connectors) | Decking & Balustrades | Material datasheet confirming >99% metallic content; EU Decision 96/603/EC | A1 |
| Powder Coating | Decking & Balustrades | Interpon D2525 ISR Technical Datasheet | A2-s1,d0 |
| Glass – Laminated Toughened (Pyroguard) | Balustrades | Declaration of Performance + EN 13501-1 Test Report | A2-s1,d0 |
| Glass – Monolithic Toughened | Balustrades | Toughened Safety Glass Statement (EN 12150-2) | A1 |
| Stainless Steel Fasteners | All systems | ISO 3506-1 / 3506-2 Composition Datasheet | A1 |
| Ancillary Components (Gaskets, Packers, Isolation Pads) | Decking & Balustrades | Exempt under Approved Document B (Ancillary Components) | Exempted |