BalcoDeck® Specification Sheet

This document outlines the specifications of materials of an installed BalcoDeck®– a deck system with integrated Aerofoil glass balustrading in accordance with British and European standards, including BS8579:2020, EN 1991, BS6180:2011, and relevant UK Building Regulations (Approved Documents K and B).

SYSTEM DESCRIPTION

Decking System

- **Material**: Structural grade extruded aluminum (6063 T6)
- **Colour and Finish**: RAL 7016 Powder coated (60-80 micron) texture finish and Mill finish
- **Installation**: Raised support system with adjustable feet. Adjustable for falls in all directions.
- **Slip resistance:** Low Slip Potential. Slip resistance in the wet: 36 (PTV), Dry: 49 (PTV).
- **Fixing method**: Self-standing system with no penetration to roof
- **Fire Safety**: Decking materials conform to non-combustible classification (Class A2-s1, d0) under BS EN 13501-1.
- **Drainage**: Free Drainage around system, does not interfere with roof drainage.
- **Access and maintenance:** Adequate provision made for safe access to all decking surfaces for cleaning and maintenance.

Glass Balustrading System

- **System type:** Balconette's - Aerofoil Glass Balustrade
- **Colour:** Royal Chrome Anodised finish / Silver Anodised finish /RAL 7016, and Mill Finish.
- **Material:** Structural grade extruded aluminum (6063 T6) and Hot deep galvanized S275 steel.
- **Glass**: 10mm monolithic toughened glass
- **Fixing Method**: Post-mounted system fixed to primary decking structure and Handrails to be fixed to the walls/structure to ends where possible, or with end posts.
- **Height**: Minimum 1100 mm above finished floor level (FFL) for balconies (per BS 6180)
- **Fire Safety**: Glass Balustrading materials conform to non-combustible classification (Class A1) under BS EN 13501-1.

STRUCTURAL DESIGN COMPLIANCE

DECKING	**OCCUPANCY CLASS/ES:** Category A – ***Areas for domestic and residential activities***: ▪ Rooms in residential buildings and houses. ▪ Bedrooms and wards in hospitals. ▪ Bedrooms in hotel and hostels kitchens and toilets. [EN 1991-1:2002: Eurocode 1]	Uniform distributed load [kN/m^2] on Deck board	**1.5 – 2.0 kN/m^2**
		Concentrated load [KN] to act at any point on the decked board	**2.0 – 3.0 kN**
		Concentrated load [KN] to act at any point on the Joist	**2.0 – 3.0 kN**
	DEFLECTION: [BS 8579: 2020]	**< 5mm under static 2kN Point Load on decked surface** *[For occupant comfort, it is preferable that no accessible portion of the balcony pedestrian surface deflects more than 5 mm under a static 2 kN concentrated load.]*	
	SLIP RESISTANCE: [EN-16165:2021]	Slip Potential = **Low**	

BALUSTRADE	**OCCUPANCY CLASS/ES:** ▪ Domestic and residential activities – (i) & (ii) ▪ Offices and work areas not included elsewhere –(iii),(iv) & (v) ▪ Areas without obstacles for moving people and not susceptible to overcrowding – (viii) & (ix) [BS 6180:2011]	Service load on handrail:	**0.74 kN/m** – Uniformly distributed line load acting 1100mm above finished floor level.
		Service load on infill:	**1.0 kN/m^2** – Uniformly distributed load
		Point load on infill design:	**0.50 kN** – Applied to any part of the glass infill
	DEFLECTION: [BS 6180:2011]	**< 25mm** *[The total displacement of any point of a barrier from its original unloaded position under the action of service loads is limited to 25mm.]*	

DESIGN STANDARDS REFERENCED

- EN 1991-1:2002: Eurocode 1 - Eurocode 1. Actions on structures - General actions - Densities, self-weight, imposed loads for buildings.
- BS 8579: 2020 - Guide to the design of balconies and terraces
- BS EN 16165:2021 - Determination of slip resistance of pedestrian surfaces - Methods of evaluation
- BS 6180:2011 - Barriers in and about buildings. Code of practice
- EN 1991 Eurocode 1: Actions on structures.
- EN 1993 Eurocode 3: Design of steel structures.
- EN 1999 Eurocode 9: Design of aluminium structures.
- BS EN 1990:2002 + A1:2005 Eurocode: UK National annex for Eurocode
- BS EN 1991-1-4:2002 + A1:2010 'Actions on structures – wind actions'
- UK National Annex to EN 1991-1-4:2002 + A1:2010 - Guidance on the determination of natural wind actions
- Approved Document B – Building regulation - Fire safety.
- Approved Document K – Building regulation - Protection from falling, collision and impact.

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