DC Iron

Adjustable Aluminium Channel code: ALA3B

Application and Test Results

Table 1 – Summary of Suitability for Use of Adjustable Aluminium Channel Using a 1000mm Wide Glass Panel Mounted into a 1200mm Wide Channel in Accordance with Table 2 of BS 6180:2011

Type of Occupancy for Part of the Building	Examples of Specific Use	Horizontal Uniformly Distributed Line Load (kN/m)	Mounted into Concrete 21.5 mm PVB Glass
Domestic and residential activities	(i) all areas within or serving exclusively one single family dwelling, including stairs, landings, etc. but excluding external balconies and edges of roofs	0.36	✓
	(ii) other residential, i.e. houses of multiple occupancy and balconies, including Juliette balconies and edges of roofs in single family dwellings	0.74	✓
Offices and work areas not included elsewhere, including storage areas	(iii) light access stairs and gangways not more than 600mm wide	0.22	✓
	(iv) light pedestrian traffic routes in industrial and storage buildings, except designated escape routes	0.36	✓
	(v) areas not susceptible to overcrowding in office and institutional buildings, also industrial and storage buildings, except as given above	0.74	✓
Areas where people might congregate	(vi) areas having fixed seating within 530mm of the barrier, balustrade or parapet	1.50	✗
Areas with tables or fixed seating	(vii) restaurants and bars	1.50	✗
Areas without obstacles for moving people and not susceptible to overcrowding	(viii) stairs, landings corridors ramps	0.74	✓
	(ix) external balconies, including Juliette balconies and edges of roofs, footways and pavements within building cartilage adjacent to basement/sunken areas	0.74	✓
Areas susceptible to overcrowding	(x) footways or pavements less than 3m wide adjacent to sunken areas	1.50	✗
	(xi) theatres, cinemas, discotheques, bars, auditoria, shopping malls, assembly areas, studios; footways or pavements greater than 3m wide adjacent to sunken areas	3.00	✗
	(xii) grandstands and stadia	(Note 1)	-
Retail areas	(xiii) all retail areas, including public areas of banks/building societies or betting shops	1.50	✗
Vehicular	(xiv) pedestrian areas in car parks,including stairs, landings, ramps, edges of internal floors, footways, edges of roofs	1.50 (Note 2)	✗
	(xv) horizontal loads imposed by vehicles	3.0 (Note 2)	-

Note 1 – See requirements of the appropriate certifying authority
Note 2 – Clause 8.1.1 of BS 6180:2011 states that "glass should not be used for vehicle protection barriers."

Safety

Our Adjustable Aluminium Channel has been tested in accordance with BS6180:2011 and can achieve a uniform distributed load (UDL) of 0.74kN at 1100mm high under the guidelines which makes it suitable for domestic and some light commercial applications.

Table 2 – Loads Achieved by Adjustable Aluminium Channel Base Mounted into Concrete

System	Channel	Fix	Glass	Load Application (mm)	Transducer Position (mm)	Imposed Line Load at 25mm (kN)	Imposed Line Load at 35mm (kN)
Adjustable Aluminium Channel	Base mounted 1200mm wide	Concrete	21.5mm PVB (1000mm wide x 1200mm high)	1100	1100	0.822	1.019

Table 3 – Working Line Load Achieved by Adjustable Aluminium Channel Base Mounted into Concrete

System	Channel	Fix	Glass	Load Application (mm)	Transducer Position (mm)	Imposed Line Load at 25mm (kN)	Working Line Load for system(kN/m)	Deflection at Working Line Load (mm)
Adjustable Aluminium Channel	Base mounted 1200mm wide	Concrete	21.5mm PVB (1000mm wide x 1200mm high)	1100	1100	0.822	0.74	22.198

Table 3 – Test Results

Glass Type	UDL Distribution Glass Height	Loading Achieved	Max Recorded Deflection(mm)
12mm toughened glass	1100	0.36Kn	21.82mm
15mm toughened glass	1100	0.74Kn	18.55mm
17.52mm toughened & PVB laminated glass	1100	0.74Kn	23.01mm
21.52mm toughened & PVB laminated glass	1100	0.74Kn	22.198mm

Maximum allowed deflection is 25mm in line with BS6180:2011