

# Rainspan\_NBS\_Specification

## H43 Metal composite panel cladding/ covering

To be read with Preliminaries/ General conditions.

120A METAL COMPOSITE PANELS  
Manufacturer: Euroclad Group Ltd

Panels: Eurobond Rainspan Wall Panels  
Manufacturer: Euroclad Group Ltd  
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- Product reference: Rainspan (Fixed Horizontally or Vertically).

To pass Ash, Combustion and Heat tests. Fire resistance tested from both sides, of up to 120 minutes Integrity & 120 minutes Insulation when tested to EN1364-1:1999

- LPCB LPS1181 Grade EXT-A30 to EXT-A120 Approved, Certificate number 545b
- LPCB LPS1208 Grade FR30 - FR120 Approved, Certificate number 545a

- External facing material:

Flat (non-ribbed) 0.7mm Colorcoat Prisma. Substrate must be ZA275 Galvalloy hot-dip zinc coated steel to BS EN 10326. Metal thickness to be a nominal 0.7mm (including zinc).

- Finish: External sheet standard colour, from the TATA Steel Prisma finish range.

Colour: From Colorcoat Prisma range

- Internal facing material: 0.7mm White Liner PE INT

Colour: Bright White

- Core insulation: Non-Combustible Stonewool (K-value 0.044W/m<sup>2</sup>K)
- Module Width: 1200mm module
- Panel thickness: 75mm - 300mm

75mm - 0.54 W/m<sup>2</sup>K

100mm - 0.40 W/m<sup>2</sup>K

125mm - 0.33 W/m<sup>2</sup>K

150mm - 0.27 W/m<sup>2</sup>K

175mm - 0.23 W/m<sup>2</sup>K

200mm - 0.20 W/m<sup>2</sup>K

240mm - 0.18 W/m<sup>2</sup>K

300mm - 0.15 W/m<sup>2</sup>K

## Accessories

- 3000mm long 2mm Galv RS1 Base support to locate bottom panel (width determined by panel thickness) \* Horizontally laid only \*
- 12mm x 6mm x 10m Rear Air Seal to air seal openings and junctions including windows and doors
- 95mm x 10mm Structural Rear Air Seal applied continuously up the vertical steel support (horizontal panels only)
- 9mm x 3mm Butyl Mastic Strip to be used between the panel face and the proposed flashings / cover strip flashing
- Flashings, trims, drips, cappings to match/contrast as required (available via Euroclad Group)
- Vertical base trim 30mm x 15mm (available via Euroclad Group) \* Vertically laid only \*
- Industry standard 50mm PVC tape to seal vertical joints (by others)
- Primary fasteners: Self drilling and tapping stainless steel screws complete
- Number and location of fasteners: Minimum of three fasteners at each end of panel
- Depth gauges on fixing guns must be used to ensure correct compression of the fixings and therefore no distortion of the panel face
- Special features: Air permeability rates of  $<1\text{m}^3/\text{hr}/\text{m}^2$  when installed in accordance with our standard recommendations.

## GENERAL REQUIREMENTS

### 170 DESIGN

- Cladding: Complete detailed design of the cladding system and submit before commencement of fabrication.
  - Standard: To BS 5427-1.
- Related works: Coordinate in detailed design.

### 172 THERMAL PERFORMANCE/ BRIDGING

- Requirement: Complete thermal design of the cladding/ covering system to avoid excessive thermal bridging.
  - Standard: MCRMA Technical Paper 14 and BRE Information Paper 1/06.

### 175 PRODUCT SAMPLES

- General: Before commencing detailed design, submit labelled samples of the following:  
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### 176 FASTENER SAMPLES

- General: During detailed design, submit labelled samples of each type of fastener.

## DESIGN/ PERFORMANCE REQUIREMENTS

### 185 PERFORMANCE COMPLIANCE

- Verification: Before commencing fabrication, submit evidence based on laboratory testing or computer modelling.
  - Verifying authority:

Verifying authority: Euroclad Group Ltd  
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### 192 SOUND TRANSMITTANCE OF CLADDING/ COVERING SYSTEM

- Minimum weighted sound reduction index (Rw) within 100 to 3150 Hz frequency range to BS 5821-3:

75mm - 31Rw (db)  
100mm - 33Rw (db)  
125mm - 33Rw (db)  
150mm - 34Rw (db)  
175mm - 35Rw (db)  
200mm - 36Rw (db)  
240mm - 36Rw (db)  
300mm - 36Rw (db)

### 196A INTEGRITY OF CLADDING/ COVERING

- Requirement: Determine profiles, sizes and thicknesses of panels and sheets, the sizes, number and spacing of fixings, and incorporation of other accessories and fittings to ensure cladding/ covering system will resist factored dead, imposed and design live loads, and accommodate deflections and thermal movements without damage, in accordance with BS 5427-1.
- Primary fasteners: Not to be subjected to any bending moment.
- Wind loads: Calculate to Eurocode 1 (EN1991.4) Standard Method and BS 5427-1 appropriate to location, exposure, height, building shape and size, taking account of existing and known future adjacent structures.  
In order for Eurobond to run span/load calculations for the panels in question we require the specific wind loads acting upon the cladding.  
Normally, we would expect to see the loads split across 3 zones, these being Zone A (corners of the building), Zone B (just in from the corners) and Zone C (remainder of elevation).Eurobond specifically require pressure & suction wind loads represented in kN/m<sup>2</sup>. If we are supplied with wind speeds we cannot run calculations based upon this information.  
If these loads are not available, the appointed Structural Engineer would normally be actioned to raise these by the nominated Contractor or (if applicable) the Contractor will action the wind load analysis 'in house'.  
If site specific wind loads are not available or can be calculated a site specific postcode is to be provided to allow indicative wind load values to be calculated through wind load modeler. All calculations must be reviewed by a Structural Engineer to ensure that the calculations conform to the site specific requirements.

### 198 WATER PENETRATION

- Requirement: Under site exposure conditions, moisture must not penetrate onto internal surfaces, or into cavities not designed to be wetted.

### 202 AVOIDANCE OF SURFACE CONDENSATION

- Requirement: Determine surface condensation risk of cladding system using the method described in BS EN ISO 13788. If necessary, revise thermal insulation to provide satisfactory temperature factor (fmin). Ensure that damage and nuisance from surface condensation and does not occur.

## FIXING CLADDING/ COVERING

Support structure: As specified by structural engineer.

- Bearing width: Minimum 140mm

## 215 PAINTING STRUCTURE

- Sequence: Paint outer surface of supporting structure before fixing cladding/ covering.

## 219A FASTENERS

- Recommended for the purpose by the cladding/ covering manufacturer.

Eurobond recommends the use of stainless steel fasteners. The exact specification depends upon the gauge of the steel work to which the panels are to be positively fixed.

The below shows our recommended fixing type for rain screen supports to the panel face

SFS type SL3/2-5-S-SV16-dia6, 0x27

Thick to thin fastener with a minimum build-up of 2mm and a maximum build-up of 5mm.

## 221 FITTINGS AND ACCESSORIES

- Unspecified fittings and accessories: Recommended for the purpose by the cladding/ covering manufacturer.

## 223 PREVENTION OF ELECTROLYTIC ACTION

- Isolating tape: Type recommended by cladding/ covering manufacturer.
  - Location: To contact surfaces of supports and sheets of dissimilar metals.

## 275 CONTINUITY THERMAL INSULATION

- Material:
  - Manufacturer: .
  - Product reference: .
- Recycled content: .
- Installation: Secure and continuous with cladding/ covering insulation.

#### 410 FIXING PANELS AND SHEETS GENERALLY

- Cut edges: Clean true.
- Penetrations: Openings to minimum size necessary.
  - Edge reinforcement:
- Orientation: Exposed joints of side laps away from prevailing wind unless shown otherwise on drawings.
- Panel and sheet ends, laps and raking cut edges: Fully supported and with fixings at top of lap.
- Fasteners: Drill holes. Position at regular intervals in straight lines, centered on support bearings.
  - Position of fasteners in oversized drilled holes: Central.
  - Fasteners torque: Sufficient to correctly compress washers.
- Debris: Remove dust and other foreign matter before finally fixing panel and sheets.
- Completion: Check fixings to ensure weathertightness and that panels and sheets are secure.
- Cut edges: Paint to match face finish.
- Preformed corners are available in both horizontal and vertical orientations. Please contact Eurobond Products for corner parameter advice.

#### 470 STRUCTURAL MOVEMENT JOINTS

- Type: Cover flashing fixed on one side over gap between panels.
- Location: Coincident with structural movement joint.
- Width of gap: To match structural movement joint requirements.
- Requirement: Weathertight.

#### 480 FLASHINGS/ TRIMS GENERALLY

- Lap joint treatment:
  - Vertical and sloping flashings/ trims: End laps to be same as for adjacent panels.
  - Horizontal flashings/ trims: End laps to be 150 mm, sealed and where possible arranged with laps away from prevailing wind.
- Method of fixing: To structure in conjunction with adjacent panels. Otherwise to panels.
  - Fasteners:

#### 540 ABUTMENTS

- Junctions with flashings: Weathertight and neatly dressed down.