

Europanel_F5 Extra, S5 Extra & G12_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 Europanel Wall Panels
Manufacturer: Euroclad Group Ltd
Wentloog Corporate Park
Wentloog Road
Cardiff
CF3 2ER
Tel: (+44) 029 20 776677
Fax: (+44) 029 20 369161
Email: panel.technical@eurocladgroup.com
Web: www.eurobond.co.uk

- Product reference: Europanel F5 Extra, S5 Extra & G12 (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) (F5 Extra) or Satinline (S5 Extra) 0.7mm Colorcoat Prisma or HPS200 Ultra. Substrate must be ZA275 Galvalloy hot-dip zinc coated steel to BS EN 10326. Metal thickness to be a nominal 0.6mm (including zinc).

- Finish: External sheet standard colour, from the TATA Steel Prisma or HPS200 Ultra finish ranges.

- Colour: From Colorcoat Prisma or HPS 200 Ultra ranges

- Internal facing material: 0.5mm White Liner PE INT

Colour: Bright White

- Core insulation: Non-Combustible Stonewool (K-value 0.044W/m²K)

- Module Width: 600 - 1200mm module

- Panel thickness: 75mm - 300mm

75mm - 0.54 W/m²K
100mm - 0.40 W/m²K
125mm - 0.33 W/m²K
150mm - 0.27 W/m²K
175mm - 0.23 W/m²K
200mm - 0.20 W/m²K
240mm - 0.18 W/m²K
300mm - 0.15 W/m²k

- Accessories:
- EBS1 Z Base support 2450mm long laid continuously to locate bottom panel *
Horizontally laid only *
- 200mm long EBS2 Z edge clip * Vertical panels 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 / omega sections
- 100mm long 3 Hole / 4 Hole Spreader Washer pre-punched to provide a positive fixing location for the fasteners
- 1200mm long Rockwool infill (depth to match panel thickness) fitted behind Omega Section
- 3656mm and 6000mm long flush Omega Section & Cap insert at each vertical joint location
- Flashings, trims, drips, cappings to match/contrast as required (available via Euroclad)
- Vertical base trim 30mm x 15mm (available via Euroclad)
- 3000mm long EBS1 J Base support if required (available via Euroclad)
- Primary fasteners: Self drilling and tapping stainless steel screws
- 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 <math><1\text{m}^3/\text{hr}/\text{m}^2</math> when installed in accordance with our standard recommendations.
- Pre-formed corners are available in the following parameters.

Horizontal corners: min leg size = panel thickness + 150mm
max overall girth including both legs = 2000mm

Vertical corners: min leg size = panel thickness + 150mm
max length, panels up to 150mm = 2400mm
max length, panels over 150mm = 1200mm

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:

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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Cardiff
CF3 2ER
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Fax: (+44) 029 20 369161

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/m².

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 (f_{min}). Ensure that damage and nuisance from surface condensation does not occur.

FIXING CLADDING/ COVERING

Support structure: As specified by structural engineer, minimum thickness 1.5mm.

- Bearing width: Minimum 160mm

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.

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, centred 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.

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.