**H92 RAINSCREEN CLADDING**

To be read with preliminaries/ general conditions – please refer to Planning and Application Guide

**TYPES OF RAINSCREEN CLADDING**

120 **RAINSCREEN CLADDING**

**Product Appearance:**

EQUITONE [natura] is a through coloured base board, with semi-transparent coloured finish which results in the structure of fibre cement material shining through. The finished panel is both weatherproof and UV-stable. Irregularities, differences in shade and traces of the manufacturing process are to be expected. The rear receives a transparent back-sealing coating.

**Primary Support Structure** (delete as necessary)**:**

Aluminium frame / timber frame / steel frame / concrete frame / brickwork / dense concrete blockwork (minimum 1450 kg/m3) / lightweight steel framing / timber frame / existing masonry.

**Rainscreen Facade: EQUITONE Fibre Cement**

**Manufacturer:**

Etex (Exteriors) UK Ltd

Wellington Road, Burton upon Trent, Staffordshire, DE14 2AP

Tel: +441283 501505 Website: www.equitone.co.uk Email: techuk@etexgroup.com

**Product Reference: EQUITONE [natura] 12mm**

**Product Composition:**

EQUITONE [natura] sheets consist of the following:

* Portland cement
* Mineral fillers
* Cellulose fibres
* Polyethylene fibre fillers
* Polyvinyl alcohol fibres

**Features and benefits:**

* BBA approved.
* Fire Classification A2-s1,d0 .
* Sound insulating.
* Resistant to extreme temperatures and frost.
* Water resistant (if in compliance with application guideline).
* Resistant to many living organisms (fungi, bacteria, insects, vermin, etc).
* Resistant to many chemicals.
* Environmentally friendly, no harmful gas emissions.
* Strong, rigid panels.
* EPD available.

**Thickness:**

12mm

**Finish / Colour:**

(Project dependent) …………………………. E.g. [natura] N073 Charcoal

**Fasteners:**

The panels should be fixed using EQUITONE approved fixings in accordance with the EQUITONE Planning & Application Guide.

The EQUITONE UNI-Screw should be used should be used in conjunction with EPDM, a 7mm diameter drill hole is required. Minimum edge distances apply.

**Number and Location:**

The number and location of the fasteners is dependent on local conditions and must be approved by a competent person.

The suppliers of the supporting aluminium frame will provide the necessary static calculations required to position these undercut holes.

Joints can be open or baffled, if baffled a 0.6mm Equitone aluminium polyester powder coated or anodised profile can be used.

**Joint Type:**

Optimum width of the joints between large panels is 10mm. The minimum permissible joint is 8mm while the maximum would be 12mm. Deviation from this requires confirmation from ETEX Exteriors prior to installation.

**Air Gap:**

A clear cavity of 30mm must be maintained immediately behind the back of the panel.

A variety of backing structures can be used in accordance with the EQUITONE Planning & Application Guide and the manufacturers recommendations.

**Secondary Support Structure** (Delete as necessary)**:**

Aluminium frame

Can be either non adjustable Omega and Zed framing or adjustable Nvelope T and L profiles with helping hand brackets.

The aluminium subframe systems is designed in accordance with BS EN 1090-3:2008 and / or Euro code 9 – Parts 1-4

This aluminium can be complemented and further improved by additional treatment including anodization whilst still maintaining a Euroclass A1 fire rating.

These systems only use the superior 6005 T6 alloy which provides strength and good performance.

Timber frame

The timber used to hold the Equitone panels in the UK has to follow the standard BS 5268-2 ‘Structural use of timber’.

The vertical battens to which the panels are fixed are to be planed on one face and one edge to ensure the correct levelling. A small gap of 5mm should be left between the batten ends.

 Panels must not be fixed over separate vertical rails – joints in rails to match joints in panels.

 Anchor specification of support frame to be calculated by an Engineer.

 Ensure Battens are protected.

Supporting the vertical battens can be done in 4 ways;

 Vertical battens fixed to horizontal counter-battens.

 Vertical battens fixed to galvanised brackets

 Vertical battens fixed to aluminium brackets

 Vertical battens suspended with special anchors

All vertical support battens are to be covered with a UV resistant material. This can be either an EPDM or aluminium strip. This strip must be wide enough to cover the batten and overhang each side by at least 5mm

Steel frame to manufacturer recommendations

This system consists of an angle bracket which is anchored back to the wall. This bracket then supports the vertical “Ω” (omega or tophat) and “U” rails which in turn support the EQUITONE Panels. A “Z” rail can be used instead of a “U” rail.

 Always use stainless steel fixings. Care must be taken to avoid bimetallic corrosion.

 Provide protective coating on cut edges.

 Panels must not be fixed over separate vertical rails – joints in rails to match joints in panels.

Vertical rails ensure that the air flow in the cavity space is not disrupted and that there is free drainage of any moisture.

776 **Thermal Insulation:**

It is obligatory to fix the insulation with approved fasteners and not to rely on the vertical battens.

U-Value

The thermal transmittance (U-value) is expressed as W/m²K (Watts per metre squared Kelvin) and defines the ability of an element of a structure to transmit heat under steady conditions. The lower this value the better the performance of the wall.

Rockwool Duo Slab is a non-combustible stone wool insulation that provides a firm and robust surface for the application of fixings, while the resilient underside can accommodate unevenness in the substrate.

785 **Breather Membrane:**

As per manufacturers recommendations.

995 **Maintenance and Cleaning:**

For minor soiling, washing with a mild household detergent or soft soap solution followed by rinsing with clear water. For specific instructions refer to the EQUITONE Cleaning & Maintenance guides.

**Manufactured Characteristics:**

EQUITONE [natura] sheets are manufactured on a Hatschek machine and are double compressed and air-dried.

**Dimensions:**

Maximum size, pre-fabrication. Approximately 15mm needs to be trimmed from the untrimmed (raw) panel to ensure correct squareness. It is recommended to source prefabricated material from an experienced fabricator.

Not rectified untrimmed 2530mm x 1280mm or 3130mm x 1280mm

Rectified trimmed 2500mm x 1250mm or 3100mm x 1250mm

Panel Weight (air-dried) **12mm** 22.8 kg/m²

Panel Weight (2530mm x 1280mm) **12mm** 73.8 kg

Panel Weight (3130mm x 1280mm) **12mm** 91.4 kg

**Tolerances:**

Thickness ± 0.9mm

Trimmed Length ± 1mm / Width ± 1mm Squareness ± 1.0mm/m

Untrimmed Length ± 8mm / Width ± 6mm Squareness ± 1.0mm/m

If fabricated by a third party refer to their manufacturing tolerance.

**Technical Properties:**

EQUITONE [natura] PRO cladding panels conform to the requirements of EN 12467:2012+A2:2018 “Fibre cement flat sheets – Product specification and test methods”.

**Impact Loads**:

Suitable for categories III and IV to the EAD 090062-00-0404: 2018. To achieve Categories I and II please contact our Technical team for further assistance.

**Panel Edge:**

The edges of the panel must be sealed with Luko. Refer to EQUITONE Planning & Application Guide.

It is recommended to sand/chamfer the decorative edge/corner of the panels to remove the sharp arris, after cutting them to size. This reduces the possibility of damage and improves their appearance.

**Health and Safety:**

During the mechanical machining of panels, dust can be released which can irritate the airways and eyes. Depending on the working conditions, adequate machinery with dust extraction and/or ventilation should be foreseen. For more information, please check the Safety Data Sheet (based on 1907/2006/EC, article 31). The reinforcement is achieved using synthetic, organic fibres of polyvinyl alcohol. These fibres are used in a similar form in the clothing industry for covering fabrics, for fleece materials and for medical fibres. A very important feature is that they are physiologically not problematic.

EQUITONE [natura] is certified with an Environmental Product Declaration according to ISO 14025 (available from local support).

The life cycle assessment includes raw material and energy production, the actual manufacturing phase, and the use phase of the fibre cement panels.