

1. Product Appearance

EQUITONE [natura] is a high-density fibre cement panel with a through colored core, and a coloured semi-transparent double layer acrylic finish which results in the structure (fibres) of the material shining through.

Irregularities, differences in shade and traces of the manufacturing process are part of the natural characteristics of the material. The rear receives a transparent back-sealing coating.

2. Colour

EQUITONE [natura] is available in a wide range of standard and special colors, manufactured based on various different through colored core/base boards as shown on the color chart below.

Colour variations are part of the natural characteristics of the material. The allowable tolerance of shade between the EQUITONE [natura] materials is minimal and is measured according to the CIELAB color model. The allowable dry mean averages of three readings are ΔL^* (brightness) of ± 2.0 , Δa^* (+red/-green) of ± 1.0 and Δb^* (+yellow/-blue) of ± 1.0 compared to the production benchmark sample and measured with the same device.

Available colors



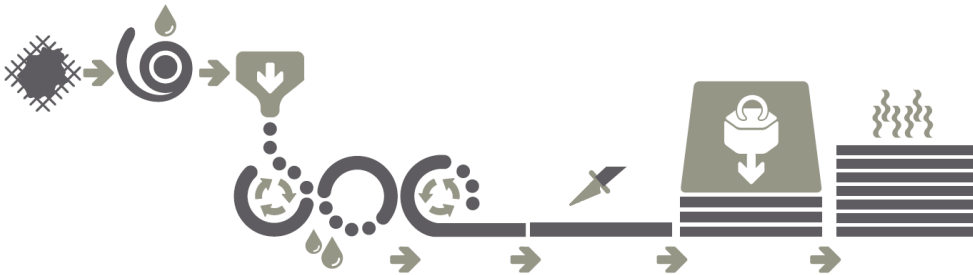
Note: It is not possible to realistically show available colors in literature, therefore the final choice of colors should be made with samples. Please order your samples on the website www.equitone.com

3. Product Composition

EQUITONE [natura] panels consist of cement, water, mineral fillers, cellulose fibres, synthetic reinforcing fibres, inorganic colour pigments (depending on the color) and an acrylic coating.

4. Production Method

EQUITONE [natura] is a highly compressed, air cured fibre cement material manufactured in Germany (Europe).



EQUITONE [natura] panels are manufactured through the Hatschek process where the base materials which are mainly cement, fibres, cellulose, pigments and water are first mixed together to form a slurry. This slurry is then pumped into several vats with rotating cylindrical sieves on the surface of which a film of fibre cement is formed through a sieving mechanism as they rotate, which is then transferred to a felt belt traveling overhead. This thin layer of fibre cement is then dewatered before being transferred via the felt belt to a forming drum on which several layers of fibre cement are collected and squeezed together until the required thickness is achieved. Once this occurs, this fresh sheet of fibre cement is cut by an automatic cutting knife. A conveyor then transports the sheet to where all the sheets are stacked with an interleaving steel plate. The stacked sheets are then highly compressed, resulting in a high density material.

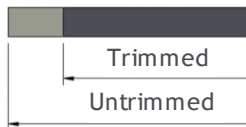
This is followed by a curing process where the panels harden under ambient temperature and without vapour pressure.

Subsequently EQUITONE [natura] receives an industrially applied multiple layer coating on the front face, and a physically equivalent sealing coating on the rear face.

In case of factory trimmed panels the edges are trimmed and additionally sealed with Luko edge sealer.

5. Dimensions and Tolerances (Metric)

EQUITONE [natura] is available in a standard thickness of 8 mm and also in 12 mm thicknesses for specific applications or fixings. The panels are available in either untrimmed (production dimension) or trimmed (maximum usable size) formats.



The panel must not be installed with untrimmed edges. Approximately 15 mm needs to be trimmed from each of the untrimmed (raw) edges. Cut edges need to be sealed with Luko edge sealer.

Dimensions		
Thickness	8 mm	12 mm

Width	
Trimmed	1250 mm
Untrimmed	1280 mm

Length	
Trimmed	2500 mm or 3100 mm
Untrimmed	2530 mm or 3130 mm

Tolerances ¹ (for cut and trimmed panels)		
Thickness	± 0.6 mm	± 0.9 mm
Width	± 1 mm	
Length	± 1 mm	
Squareness	± 1.0 mm/m	

Tolerances ¹ (for untrimmed panels)		
Thickness	± 0.6 mm	± 0.9 mm
Width	± 6 mm	
Length	± 8 mm	
Squareness	± 1.0 mm/m	

Weight per m ² (air dry)		
	15.4 kg/m ²	22.8 kg/m ²

Weight per panel (without pallet)		
2500 x 1250 mm (trimmed)	48.1 kg	71.3 kg
3100 x 1250 mm (trimmed)	59.7 kg	88.4 kg
2530 x 1280 mm (untrimmed)	49.9 kg	73.8 kg
3130 x 1280 mm (untrimmed)	61.7 kg	91.4 kg

Packaging		
Number of panels on pallet	30	20

Usable surface per pallet		
2500 x 1250 mm (trimmed)	93.75 m ²	62.5 m ²
3100 x 1250 mm (trimmed)	116.25 m ²	77.5 m ²

Color tolerance (CIELAB) ²		
ΔL^* , brightness		± 2.0
Δa^* , + red/ - green		± 1.0
Δb^* , + yellow/ - blue		± 1.0

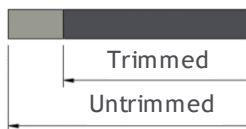
¹ Factory tolerances for trimmed and untrimmed panels outperform the requirements of the EN12467 Level I and II dimensional tolerances, respectively.

² Color tolerance are only to be measured on dry surfaces.

³ Imperial values are approximate and are based on the metric values

5.1 Dimensions and Tolerances (Imperial)

EQUITONE [natura] is available in a standard thickness of 5/16 in and also in 15/32 in thicknesses for specific applications or fixings. The panels are available in either untrimmed (production dimension) or trimmed (maximum usable size) formats.



The panel must not be installed with untrimmed edges. Approximately 19/32 in needs to be trimmed from each of the untrimmed (raw) edges. Cut edges need to be sealed with Luko edge sealer.

Dimensions		
Thickness	5/16 in	15/32 in

Width	
Trimmed	49 in
Untrimmed	50 in

Length	
Trimmed	98 in or 122 in
Untrimmed	99 1/2 in or 123 in

Tolerances ¹ (for cut and trimmed panels)		
Thickness	± 0.0236 in	± 0.0354 in
Width	± 0.0394 in	
Length	± 0.0394 in	
Squareness	± 0.0394 in/ft	

Tolerances ¹ (for untrimmed panels)		
Thickness	± 0.0236 in	± 0.0354 in
Width	± 1/4 in	
Length	± 5/16 in	
Squareness	± 0.0394 in/ft	

Weight per m ² (air dry)		
	3.15 lb/ft ²	4.67 lb/ft ²

Weight per panel (without pallet)		
2500 x 1250 mm (trimmed)	106 lb	157 lb
3100 x 1250 mm (trimmed)	132 lb	195 lb
2530 x 1280 mm (untrimmed)	110 lb	163 lb
3130 x 1280 mm (untrimmed)	136 lb	202 lb

Packaging		
Number of panels on pallet	30	20

Usable surface per pallet		
2500 x 1250 mm (trimmed)	1010 ft ²	673 ft ²
3100 x 1250 mm (trimmed)	1250 ft ²	834 ft ²

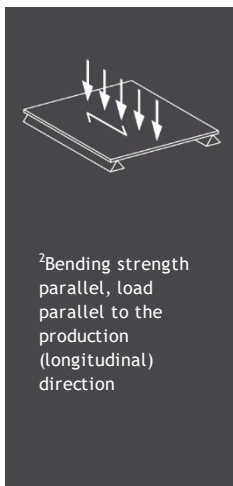
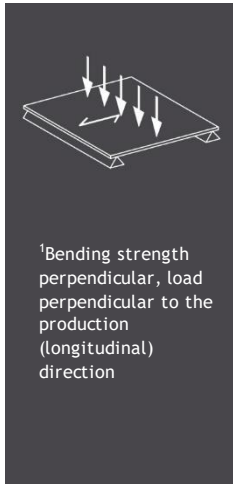
Color tolerance (CIELAB) ²		
ΔL^* , brightness		± 2.0
Δa^* , + red/ - green		± 1.0
Δb^* , + yellow/ - blue		± 1.0

¹ Factory tolerances for trimmed and untrimmed panels outperform the requirements of the EN12467 Level I and II dimensional tolerances, respectively; as well all criteria set fourth on ASTM C 1185.

² Color tolerance are only to be measured on dry surfaces.

6. Material Properties (EN)

EQUITONE [natura] cladding panels conform to the requirements of EN 12467:2012+A2:2018 “Fibre cement flat sheets - Product specification and test methods“. The results below are presented as defined by the standard.



Classification			
Type of product	EN12467	NT	
Durability classification	EN12467	Category A	
Strength classification	EN12467	Class 4	
Dimensional tolerances for trimmed panels	EN12467	Level I	
Dimensional tolerances for untrimmed panels	EN12467	Level II	

Physical requirements and characteristics				
Mean density	dry	EN12467	1750	kg/m ³
Moisture movement	30-90 %	EN12467	0.1	%
Mean bending strength perpendicular ¹	ambient	EN12467	24.5	MPa
Mean bending strength parallel ²	ambient	EN12467	19.5	MPa
Average bending strength	wet	EN12467	≥18.0	MPa
Mean module of elasticity	ambient	EN12467	12,000	MPa
Water impermeability test		EN12467	No drops/Pass	

Durability requirements		
Freeze-thaw test for category A panel	EN12467	Pass
Heat-rain tests for category A panel	EN12467	Pass
Warm water test	EN12467	Pass
Soak-dry test	EN12467	Pass

Fire and safety		
Reaction to fire	EN13501	A2-s1,d0

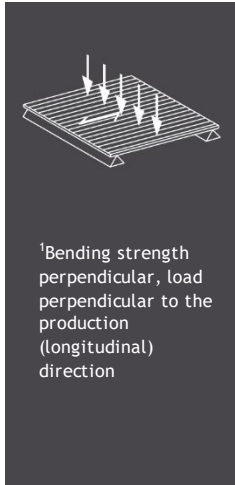
Other characteristics				
Thermal movement	α	-	0.01	mm/mK
Thermal conductivity	λ	-	0.407	W/mK
Moisture content at 20°C, 65 % humidity		-	< 6	M.-%
Poisson's ratio	ν	-	0.2	-

Note to the units: 1 K (degree Kelvin) = 1 °C, 1 MPa (Mega Pascal) = 1 N/mm², M.-% = mass percentage

Note: EQUITONE [natura] panels also comply with the requirements of ISO8336:2017 “Fibre-cement flat sheets - Product specification and test methods“

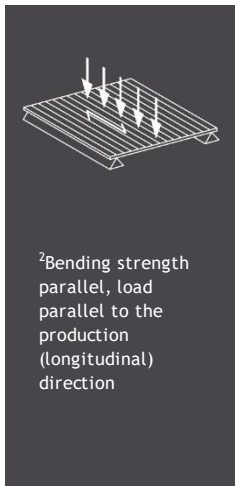
6.1 Material Properties (ASTM)

EQUITONE [linea] cladding panels conform to the requirements of ASTM C 1185-08 (2012) “Standard Specifications for Flat Fiber-Cement Panels.”. The results below are presented as defined by the standard.



Classification			
Flexural strength classification	ASTM C 1185-5	Grade III	
Dimensional tolerances for trimmed panels	ASTM C 1185-7	Pass	

Physical requirements and characteristics				
Mean density	dry	ASTM C 1185-6	111.8	lb/ft ³
Moisture movement	30-90 %	ASTM C 1185-8	0.05	%
Flexural Strength	dry	ASTM C 1185-5	3,358	psi
Flexural Strength	wet	ASTM C 1185-5	2,160	psi
Water Tightness		ASTM C 1185-11	Pass	
Moisture Content		ASTM C 1185-10	3.9	%



Durability requirements			
Frost Resistance (Freeze/Thaw)	ASTM C 1185-12	Pass	
Warm water resistance test	ASTM C 1185-13	Pass	
Mean water absorption	ASTM C 1185-9	14.5	%

Fire and safety			
Flame spread index	ASTM E 84-07	0	
Smoke development index	ASTM E 84-07	0	
Hose stream test	ASTM E 119.12A	Pass	
Vertical tube furnace (B)	ASTM 136.19A	Pass	

Other characteristics				
Thermal movement	α	-	0.667e ⁻⁴	in/ft° F
Thermal conductivity	λ	ASTM C518	0.236	BTU/h ft° F

Note: EQUITONE [natura] panels also comply with the requirements of ASTM C 1185-08 (2012) “Standard Test Methods for Sampling and Testing Non-Asbestos Fibre-Cement Flat Sheet, Roofing and Sliding Shingles, and Clapboards” and “ICC-ES AC90, Acceptance Criteria for Fibre Cement Siding used as Exterior Wall Siding.”.

7. Advantages

Providing the application guidelines are followed, EQUITONE [natura] fibre-cement panels have the following superior mix of properties compared to other materials:

- Recyclable according to Environmental Product Declaration (EPD)
- Expected average reference service life of 50 years (based on EPD)
- Fire safe (no fire ignition, no spread of fire)
- Improved sound insulation of the façade
- UV-resistant
- Resistant to extreme temperatures and frost
- Weather resistant
- Resistant to many living organisms (fungi, bacteria, insects, vermin, etc.)
- Resistant to many chemicals
- Material appearance due to transparent coating
- Strong, rigid panel
- Hail impact tested

Working with the material:

- The material is easy to drill, cut and install with the proper tools

8. Applications

EQUITONE [natura] can be used in several ventilated applications, including, but not limited to:

- Ventilated facade or rainscreen cladding
- Window and door reveal
- Exterior ceiling: decorative cladding of ceiling
- Soffits, eaves and verge boards
- Interior wall and ceiling lining (subject to local regulations)

For restrictions on the above-mentioned applications read the specific application guidelines.

The panels may be face or concealed fixed with Etex proprietary or recommended fixing solutions.

EQUITONE [natura] can not be used in the following applications, but not limited to: Internal applications exposed to direct moisture e.g. wet areas, situations with direct contact with standing snow or ice, applications where exposed to long term temperatures exceeding 80°C / 176°F, and roof applications.

9. Health and Safety Aspects

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. The inhalation of fine (respirable size) quartz containing dust, particularly when in high concentrations or over prolonged periods of time can lead to lung disease and an increased risk of lung cancer. For more information, please visit www.equitone.com for the most recent Safety Information Sheet.

10. Maintenance and Cleaning

Refer to the relevant "EQUITONE Cleaning Information" Guide.

11. Certification



The manufacturer can - within the framework of the European Regulation N° 305/2011 (CPR) - present the Declaration of Performance (DOP) of the product such confirming that the product has a CE marking. The CE marking guarantees that the product is in accordance with the basic requirements determined by the harmonized European standard and applicable to the product.

The Declaration of Performance is presented in accordance with the CPR and can be found at www.equitone.com.

The manufacturing facility holds the latest versions of the following ISO certificates

- ISO 9001 Quality Management System
- ISO 14001 Environmental Management System
- ISO 45001 Occupational Health and Safety
- ISO 50001 Energy Management System

EQUITONE [natura] is certified with an Environmental Product Declaration according to ISO 14025 or EN 15804. The life cycle assessment includes raw material and energy production, the actual manufacturing phase, and the use phase of the fibre cement panels. More information available in the Material Sustainability Datasheet.

12. Information



Please visit www.equitone.com for contact details and further information and technical documents.

Disclaimer

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