

## 1. Product Appearance

EQUITONE [linea] is a high-density through colored fibre cement panel with no coating. The panel has an honest, pure and natural appearance with natural color variations and hues. The natural characteristic of the panel may be accentuated by the production process as well as light or dark inclusions.

The front face of the panel features grooves. The top of the ridges are characterised by fine sanding lines in the longitudinal direction. The revealed texture of the fibre cement core in the grooves enhances the 3D surface aspect of the panel.

The panel has been made water repellent by means of hydrophobation.

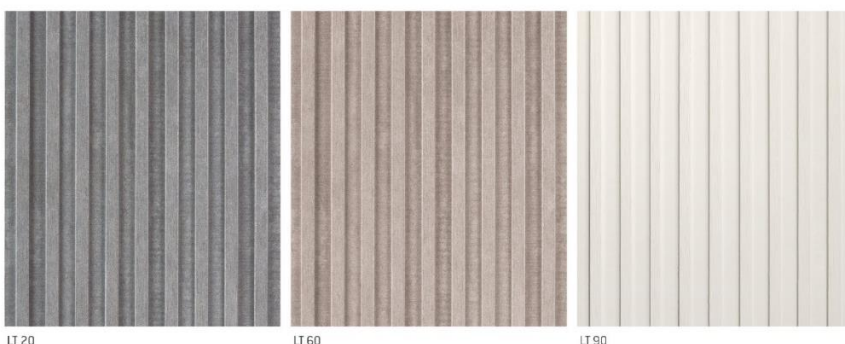
## 2. Color

The color is throughout the panel. Natural color variations, accentuated by the orientation of the panel, the viewing angle and the effects of light and moisture, strengthen the natural look of the façade.

Color variations and random hues are part of the natural characteristics of the material. Each panel has its own individual character.

Color differences are measured according to a simplified CIELAB color model, by which only the parameter lightness  $\Delta L$  of the color is followed. Tolerated color differences on a dry façade are  $\Delta L^* = \pm 2.5$ .

Available colors



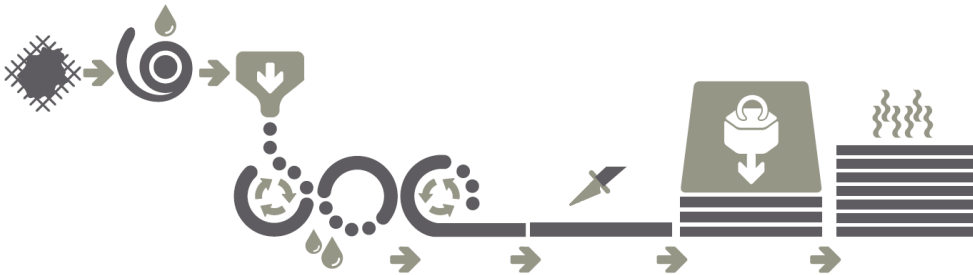
Note: It is not possible to realistically show available colors in literature, therefore the final choice of colors should be made with samples. Please order your samples on the website [www.equitone.com](http://www.equitone.com)

### 3. Product Composition

EQUITONE [linea] panels consist of cement, quartz sand, cellulose, natural calcium silicate, inorganic color pigments, water and additives.

### 4. Production Method

EQUITONE [linea] is a highly compressed, autoclaved fibre cement material manufactured in Belgium (Europe).



EQUITONE [linea] panels are manufactured through the Hatschek process where the base materials which are mainly cement, sand, 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 in an autoclave where the panels harden under high temperature and pressure. After curing the panels receive their final finish. The surface is mechanically processed to create a grooved surface.

Subsequently and finally, EQUITONE [linea] panels receive a hydrophobation making the surface water repellent. The back side receives no hydrophobation.

## 5. Dimensions and Tolerances (Metric)

EQUITONE [linea] is available in a standard thickness of 10 mm. The panels are always trimmed.

Dimensions	
Panel Thickness	8 mm (valley) / 10 mm (including ridges)
Nominal Thickness (for static bending strength calculation)	8 mm
Number of ridges on full width panel	57
Number of valleys on full width panel	56

Width	
Trimmed	1220 mm

Length	
Trimmed	2500 mm or 3050 mm

Tolerances <sup>1</sup> (for trimmed panels)	
Total thickness (including ridges)	± 1 mm
Thickness in valley	8mm (-0.5 mm / +1.0 mm)
Width	± 2 mm
Length	± 2 mm
Squareness	± 1.0 mm/m

Weight per m <sup>2</sup> (nominal, ambient)	
	16.8 kg/m <sup>2</sup>

Weight per panel (without pallet)	
2500 x 1220 mm (trimmed)	51.2 kg
3050 x 1220 mm (trimmed)	62.5 kg

Packaging	
Number of panels on pallet	30

Usable surface per pallet	
2500 x 1220 mm (trimmed)	91.5 m <sup>2</sup>
3050 x 1220 mm (trimmed)	111.6 m <sup>2</sup>

Color tolerance (CIELAB) <sup>2</sup>	
ΔL*, brightness	± 2.5

## 5.1 Dimensions and Tolerances (Imperial)

EQUITONE [linea] is available in a standard thickness of 3/8". The panels are always trimmed.

Dimensions	
Panel Thickness	5/16 in(valley) / 3/8 in (including ridges)
Nominal Thickness (for static bending strength calculation)	5/16 in
Number of ridges on full width panel	57
Number of valleys on full width panel	56

Width	
Trimmed	48 in

Length	
Trimmed	98 in or 120 in

Tolerances <sup>1</sup> (for trimmed panels)	
Total thickness	± 1/16 in
Thickness in valley	5/16 in (-1/32 in / +1/16 in)
Width	± 1/8 in
Length	± 1/8 in
Squareness	± 1/16 in/ft

Weight per ft <sup>2</sup> (nominal, ambient)	
	3.44 lb/ft <sup>2</sup>

Weight per panel (without pallet)	
98" x 48" (trimmed)	112.9 lb
120" x 48" (trimmed)	137.8 lb

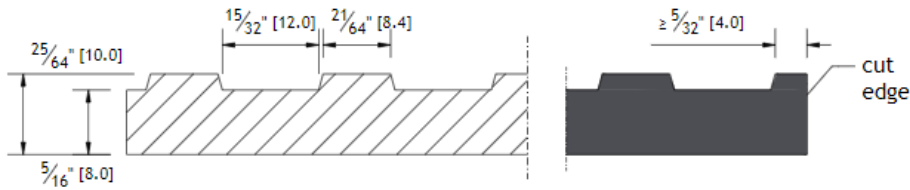
Packaging	
Number of panels on pallet	30

Usable surface per pallet	
98" x 48" (trimmed)	984.9 ft <sup>2</sup>
120" x 48" (trimmed)	1201.3 ft <sup>2</sup>

Color tolerance (CIELAB) <sup>2</sup>	
ΔL*, brightness	± 2.5

The dimensions of the grooves are purely indicative. These are nominal dimensions subject to manufacturing tolerances. The grooves are longitudinal in the panel.

When cutting [linea] panels the center of the valleys or ridges should be kept as reference. When cutting through a ridge, minimum 4 mm of the ridge should be kept at panel edges to prevent damage of the edge.



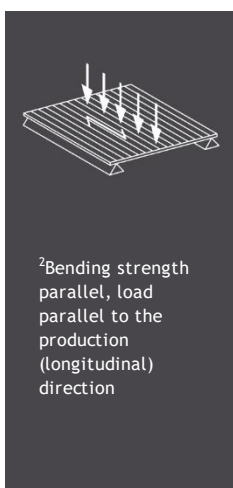
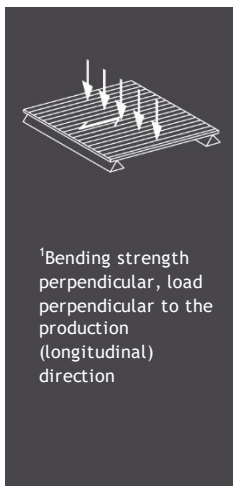
<sup>1</sup> Factory tolerances for trimmed panels outperform the requirements of the EN12467 Level I dimensional tolerances, as well as all criteria set forth on ASTM C 1185.

<sup>2</sup> Color tolerance is only to be measured on the top of the ridges, not in the valleys and only on dry surfaces.

<sup>3</sup> Imperial values are approximate and are based on the metric values

## 6. Material Properties (EN)

EQUITONE [linea] cladding panels conform to the requirements of EN 12467:2012+A1:2018 “Fibre-cement flat sheets - Product specification and test methods“. The results below are presented as defined by the standard.



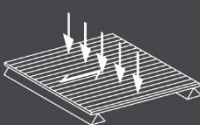
Classification				
Type of product		EN12467	NT	
Durability classification		EN12467	Category A	
Strength classification		EN12467	Class 5	
Dimensional tolerances for trimmed panels		EN12467	Level I	
Physical requirements and characteristics				
Mean density	dry	EN12467	1630	kg/m <sup>3</sup>
Moisture movement	30-90 %	EN12467	<0.08	%
Mean bending strength perpendicular <sup>1</sup>	ambient	EN12467	32.0	MPa
Mean bending strength parallel <sup>2</sup>	ambient	EN12467	22.0	MPa
Average bending strength	wet	EN12467	≥24.0	MPa
Mean module of elasticity	ambient	EN12467	14,000	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		EN13501-1	A2-s1,d0	
Other characteristics				
Thermal movement	α	-	0.01	mm/mK
Thermal conductivity	λ	ASTM C518	0.39	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/mm<sup>2</sup>, M.-% = mass percentage

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

## 6.1 Material Properties (ASTM)

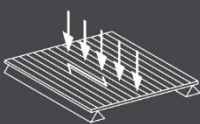
EQUITONE [linea] cladding panels conform to the requirements of ASTM C 1185-08 (2012) “Standard Specifications for Flat Fiber-Cement Panels.”. The results below are presented as defined by the standard.



<sup>1</sup>Bending strength perpendicular, load perpendicular to the production (longitudinal) direction

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

Physical requirements and characteristics				
Mean density	dry	ASTM C 1185-6	101.0	lb/ft <sup>3</sup>
Moisture movement	30-90 %	ASTM C 1185-8	0.02	%
Flexural Strength	dry	ASTM C 1185-5	3,190	psi
Flexural Strength	wet	ASTM C 1185-5	3,886	psi
Water Tightness		ASTM C 1185-11	Pass	
Moisture Content		ASTM C 1185-10	5.9	%



<sup>2</sup>Bending strength parallel, load parallel to the production (longitudinal) direction

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	19%

Fire and safety		
Flame spread index	ASTM E 84-07	0
Smoke development index	ASTM E 84-07	5
Hose stream test	ASTM E 119.12A	Pass
Vertical tube furnace (B)	ASTM 136.19A	Pass

Other characteristics				
Thermal movement	$\alpha$	-	0.667e <sup>-4</sup>	in/ft° F
Thermal conductivity	$\lambda$	ASTM C518	0.225	BTU/h ft° F

Note: EQUITONE [linea] 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 [linea] 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 facade
- UV-resistant
- Resistant to extreme temperatures
- Weather resistant
- Resistant to many living organisms (fungi, bacteria, insects, vermin, etc.)
- Resistant to many chemicals
- Strong and rigid panel
- Hail impact tested
- Can be ideally combined with [tectiva] and [lunara] in the same color
- The unique 3D design plays with natural light to produce compelling visual effects

Working with the material:

- The material is easy to drill, cut and install with the proper tools
- Cut edges do not need to be sealed

## 8. Applications

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

- Ventilated façade 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 [linea] 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](http://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](http://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

EQUITONE [linea] 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](http://www.equitone.com) for contact details and further information and technical documents.

### Disclaimer

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