

## 1. Product Appearance

EQUITONE [lunara] 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.

Its unique texture has a random-looking, non-repeating surface structure, covered with tiny irregular elevations and depressions providing a natural appearance. Thanks to the special production process each panel has its own individual and unique character, no two panels are alike. Color deviating inclusions contribute to the natural appearance of the surface

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 facade.

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 facade are  $\Delta L^* = \pm 2.5$ .

Available colors



LA 20



LA 60

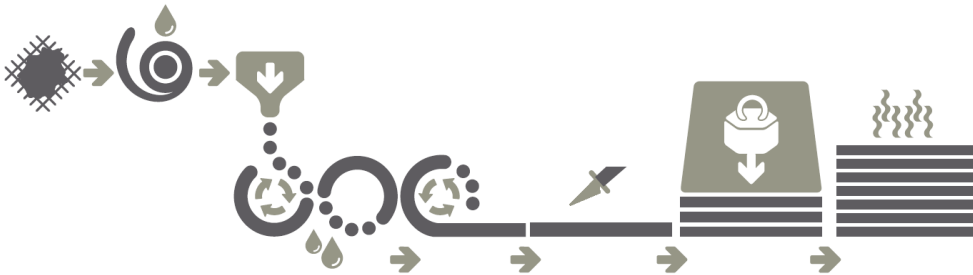
Note: It is not possible to realistically show available colors in literature, therefore the final choice of colors should be made with samples. Please order your samples on the website [www.equitone.com](http://www.equitone.com)

### 3. Product Composition

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

### 4. Production Method

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



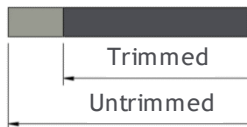
EQUITONE [lunara] panels are manufactured through the Hatschek process where the base materials which are mainly cement, sand, cellulose, pigments and water are first mixed together to form a slurry. This slurry is then pumped into several vats with rotating cylindrical sieves on the surface of which 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 then mechanically processed to create a unique surface.

Subsequently and finally, EQUITONE [lunara] panels receive a hydrophobation making them water repellent.

## 5. Dimensions and Tolerances (Metric)

EQUITONE [lunara] is available in a standard thickness of 10 mm. 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 10 mm needs to be trimmed from each of the untrimmed (raw) edges.

### Dimensions

Panel Thickness base sheet	10 mm
Nominal Thickness (for static bending strength calculation)	8 mm

### Width

Trimmed	1220 mm
Untrimmed	1240 mm

### Length

Trimmed	2500 mm or 3050 mm
Untrimmed	2520 mm or 3070 mm

### Tolerances<sup>1</sup> (for trimmed panels)

Thickness (at crest)	10 mm (± 1.0 mm)
Thikness (in valley)	8 mm (-0.2 mm / +1.0 mm)
Width	± 3 mm
Length	± 3 mm
Squareness	± 1.0 mm/m

### Tolerances<sup>1</sup> (for untrimmed panels)

Thickness (at crest)	10 mm (± 1.0 mm)
Thikness (in valley)	8 mm (-0.2 mm / +1.0 mm)
Width	± 5 mm
Length	± 5 mm
Squareness	± 2.0 mm/m

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

	18.6 kg/m <sup>2</sup>
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### Weight per panel (without pallet)

2500 x 1220 mm (trimmed)	56.7 kg
3050 x 1220 mm (trimmed)	69.2 kg
2520 x 1240 mm (untrimmed)	58.1 kg
3070 x 1240 mm (untrimmed)	70.8 kg

**Packaging**

Number of panels on pallet	30
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**Usable surface per pallet**

2500 x 1220 mm (trimmed)	91.5 m <sup>2</sup>
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3050 x 1220 mm (trimmed)	111.6 m <sup>2</sup>
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**Color tolerance (CIELAB) <sup>2</sup>**

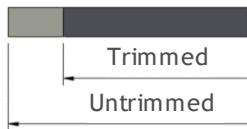
$\Delta L^*$ , brightness	$\pm 2.5$
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<sup>1</sup> Factory tolerances for trimmed and untrimmed panels outperform the requirements of the EN12467 Level I and II dimensional tolerances, respectively.

<sup>2</sup> Color tolerance are only to be measured on dry surfaces.

## 5.1 Dimensions and Tolerances (Imperial)

EQUITONE [lunara] is available in a standard thickness of 3/8". 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 3/8" needs to be trimmed from each of the untrimmed (raw) edges.

### Dimensions

Panel Thickness base sheet	3/8 in
Nominal Thickness (for static bending strength calculation)	5/16 in

### Width

Trimmed	48 in
Untrimmed	48 3/4 in

### Length

Trimmed	98 in or 120 in
Untrimmed	99 in or 121 in

### Tolerances<sup>1</sup> (for trimmed panels)

Thickness (at crest)	3/8 in (± 1/16 in)
Thikness (in valley)	5/16 in (-1/32 in / +1/16 in)
Width	± 1/8 in
Length	± 1/8 in
Squareness	± 1/16 in/ft

### Tolerances<sup>1</sup> (for untrimmed panels)

Thickness (at crest)	3/8 in (± 1/16 in)
Thikness (in valley)	5/16 in (-1/32 in / +1/16 in)
Width	± 3/16 in
Length	± 3/16 in
Squareness	± 1/16 in/ft

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

	3.8 lb/ft <sup>2</sup>
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### Weight per panel (without pallet)

98 x 48 in (trimmed)	125 lb
120 x 48 in (trimmed)	152.56 lb
99 x 48 3/4 in (untrimmed)	128.1 lb
121 x 48 3/4 in (untrimmed)	156.1 lb

Packaging

Number of panels on pallet 30

Usable surface per pallet

98 x 48 in (trimmed) 984.9 ft<sup>2</sup>

120 x 48 in (trimmed) 1201.25 ft<sup>2</sup>

Color tolerance (CIELAB) <sup>2</sup>

$\Delta L^*$ , brightness  $\pm 2.5$

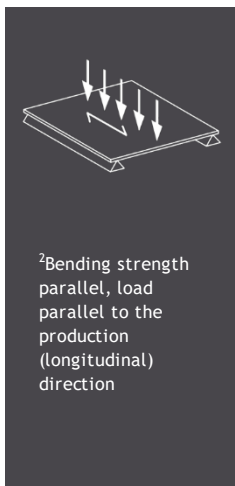
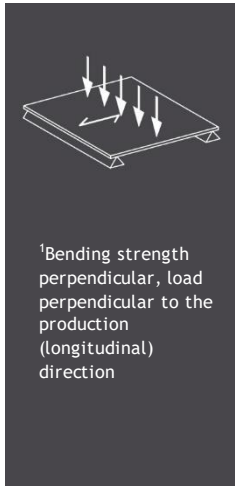
<sup>1</sup> Factory tolerances for trimmed and untrimmed panels outperform the requirements of the EN12467 Level I and II dimensional tolerances, respectively; as well all criteria set fourth on ASTM C 1185.

<sup>2</sup> Color tolerance are only to be measured on dry surfaces.

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

## 6. Material Properties (EN)

EQUITONE [lunara] 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 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	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
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

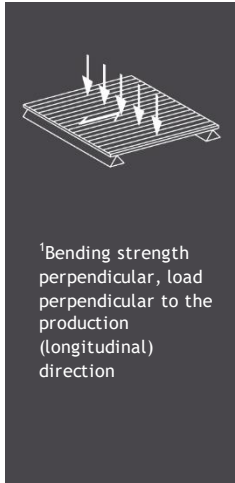
Other characteristics				
Thermal movement	$\alpha$	-	0.01	mm/mK
Thermal conductivity	$\lambda$	-	0.39	W/mK
Moisture content at 23°C, 80 % humidity		-	6	M.-%
Poisson's ratio	$\nu$	-	0.2	-

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

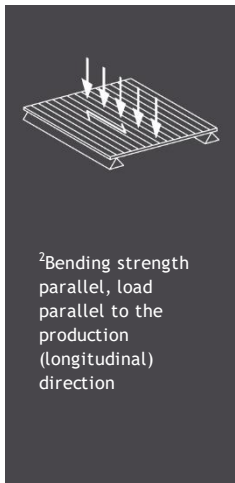
## 6.1 Material Properties (ASTM)

EQUITONE [lunara] 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 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	%



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	0.226	BTU/h ft° F

Note: EQUITONE [lunara] 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 [lunara] 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
- Can be ideally combined with [tectiva] and [linea] in the same color

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 [lunara] 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 [lunara] 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 [lunara] 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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