

# Cladding

The URBANNATURE Range



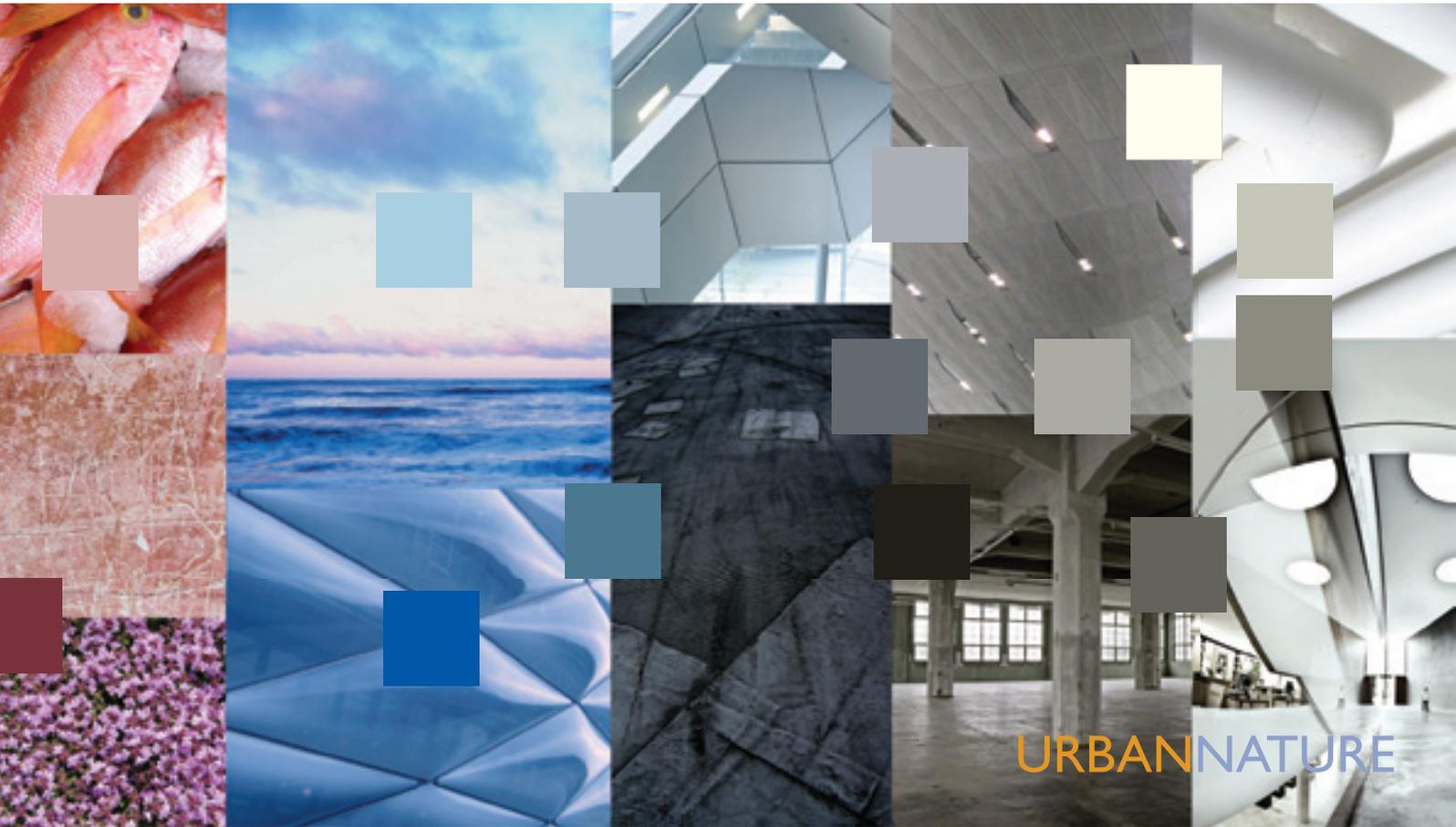


# URBANNATURE

## Colours communicate

Colours are, at heart, one of nature's means of communication. Colours affect us directly, stimulating feelings and creating moods. Having access to the right colours lets you create the aesthetic impact you want. That is why Cembrit has reinvigorated its colour offerings according to the URBANNATURE mindset.

Front cover: WTW Cinema, Newquay, Cornwall. Fusion Executive Rock, Edge Aero, Edge Etna and True. Olympus. NBDA Architects.



URBANNATURE

*Note some of the colours shown above are available in more than one range*

The new Cembrit cladding colours collectively known as the URBANNATURE palette, were carefully chosen. They reflect current trends influencing architecture: greater urbanisation combined with renewed interest in nature. Even more importantly, they resonate with deep-seated human urges. For better architecture, and more sympathetic environments.

**Colours based on careful thought**

How did we decide on the new Cembrit colours? The URBANNATURE concept was developed in close co-operation between the Cembrit R&D department and designers and architects from Pentagon Design. They considered how human beings perceive and respond to colours, both consciously and unconsciously. Based on research and testing, we developed a range of colours that please, soothe and excite. Just as they do in nature.

**For distinct design on any scale**

Our goal with the URBANNATURE colour range was to offer a colour palette that supports architectural creativity. To bring you colours that enhance and interact with your buildings. Subtle or bold, restrained or daring. Mix and match to suit your vision.

**Visionary and practical**

The URBANNATURE palette is not just visionary in scope – it takes the practicalities of modern architecture into account, too. The way we perceive colours depends on light and scale: a large surface makes a very different impact than a tiny sample. All Cembrit colours have been tested on large, sunlit surfaces to ensure that you get the desired glow and optimal colour depth.





# Cembrit Fusion

Exclusive and through-coloured with uniformly transparent surface coat

Prepare for an intense colour experience. Cembrit Fusion, the next generation of claddings. Here, you get consistency inside and out; these through-coloured fibre-cement sheets ensure a uniform appearance even if chipping occurs. Not only that: the crowning glory of the Cembrit Fusion range is protective semi-transparent coating which is integral with the through-coloured sheets. The sheets have a uniformly matt, stylish finish that allows the unique structure of the fibre-cement to shine through.

The surface treatment makes the material resistant to humidity and dirt, ensuring that regardless of what the weather throws at your facade, it remains uniformly beautiful.



	Through coloured	Painted	Colour availability	Surface treated	Dimensions mm	Thickness mm
<b>Cembrit Fusion</b>	Yes	No	10	Yes	1250 x 2500 1250 x 3050	8

**CEMBRIT FUSION**



Cembrit Fusion is supplemented by a complete range of accessories to ensure simple, easy installation and a sleek, stylish end result that will last longer.



# Cembrit True

Through-coloured and surface protected

With Cembrit True, you see the natural hues and variations of the through-coloured base board. Available in 9 colours selected as part of the URBANNATURE concept, the Cembrit True sheet is protected by a specially developed, transparent coating which helps minimise maintenance. The subtle colour variations remain visible; the transparent coating simply adds extra depth. The surface treatment also helps your facade retain its light, pastel appearance even when the weather is wet. Available in a standard format or individually cut to suit your specifications.

Horizon School, Swanley, Kent. True Etna. Austin Smith Lord architects.

Barnfield West Academy, Luton Bedfordshire. True Etna. Architecture PLB.



	Through coloured	Painted	Colour availability	Surface treated	Dimensions mm	Thickness mm
<b>Cembrit True</b>	Yes	No	9	Yes	1250 x 2500 1250 x 3050	8

**CEMBRIT TRUE**



*Cembrit True is supplemented by a complete range of accessories to ensure simple, easy installation and a sleek, stylish end result that will last longer.*



# Cembrit Edge

Where authenticity and colour meets

In the Cembrit Edge range, grey fibre-cement is given two coats of a semi-transparent glaze. You get the natural properties of the cement board, but you also get to explore the world of colour. The final result is a strong, smooth and expressive surface that still allows the texture and variety of the fibre-cement to shine through.

The 12 colours selected as part of the URBANNATURE palette makes Cembrit Edge an ideal choice for projects which call for facades characterised by unique, elegantly understated nuances. The colours are inspired by dynamic aspects of nature; aspects which form the foundation of urban living.



	Through coloured	Painted	Colour availability	Surface treated	Dimensions mm	Thickness mm
Cembrit Edge	No	No	12	Yes	1250 x 2500 1250 x 3050	8

**CEMBRIT EDGE**



Cembrit Edge is supplemented by a complete range of accessories to ensure easy installation, longer life, and an attractive end result.



# Cembrit Metro

Painted surface – in the colour of your choice

Cembrit Metro lets you play with colour to your heart's content. The sheets are covered with water-based acrylic paint that is 100% opaque, creating a smooth, even effect. The result is sheets that are resistant to green moss and algae, water stains, and dirt. They can take plenty of impact, too: the sheets will not buckle if struck, making them ideally suited to the hustle and bustle of the building site.

The URBANNATURE colours selected for the Cembrit Metro range are inspired by vibrant cities in Europe. Clear and bright, they exude sophisticated confidence. Cembrit Metro can also be supplied in any RAL colour.

Cembrit baseboard is available, with no colouration or surface treatment, for on-site finishing. Please contact Cembrit technical department for detailed advice on formats and installation.

Wendell Park School, Hammersmith, London. Metro Geneva. de Metz Forbes Knight Architects Ltd.



	Through coloured	Painted	Colour availability	Surface treated	Dimensions mm	Thickness mm
<b>Cembrit Metro</b>	No	Yes	18 + NCS	No	1250 x 2500 1250 x 3050	8

**CEMBRIT METRO**



Cembrit Metro is supplemented by a complete range of accessories to ensure easy installation, longer life, and an attractive end result.

# Technical Information

## Ventilated façade, principle

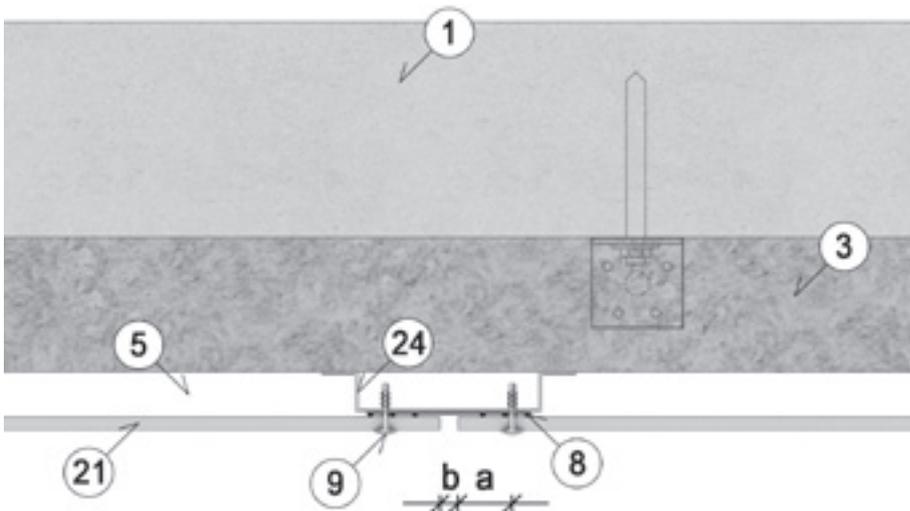
Cladding must always be carried out as a rainscreen with min. 25mm clear airpath between the cladding and the rear lining/ insulation material. In certain applications, such as high rise buildings, local regulations may demand a larger gap.

Airpath openings must have a cross section of at least 200 cm<sup>2</sup>/m.



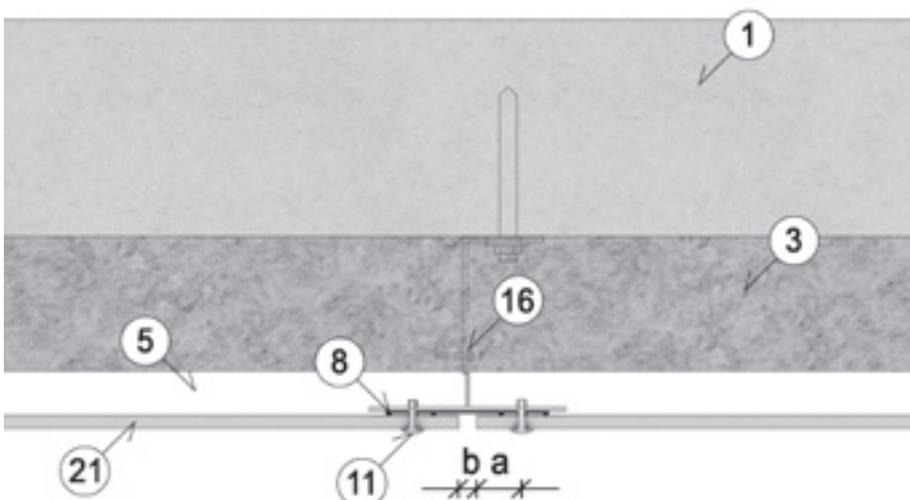
## Fixing with screws to steel support sections

- 1 Load bearing wall
- 3 Insulation
- 5 Air gap min 25 mm
- 8 EPDM underlay 90 mm
- 9 Facade screw 4.8 x 25
- 21 Facade board
- 24 Steel profile
- a Edge distance min 40 mm
- b Joint width 8 mm

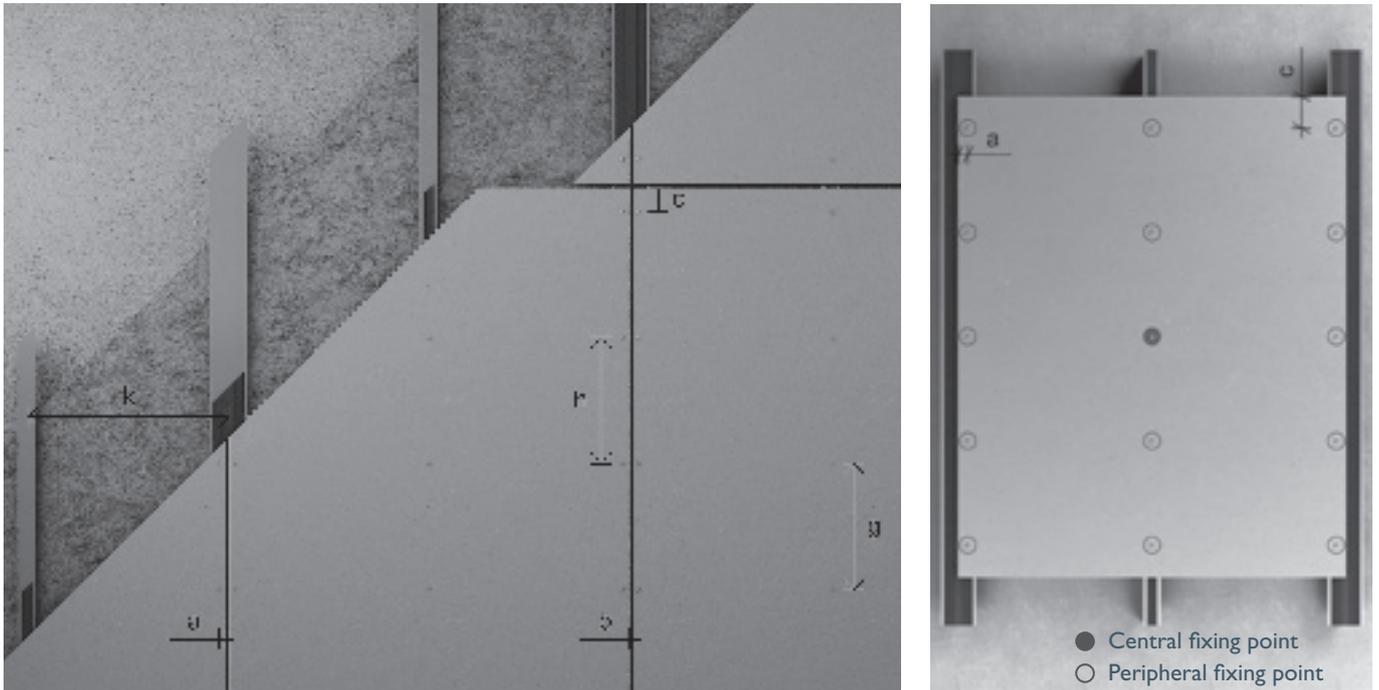


## Fixing with rivets to aluminium support sections

- 1 Load bearing wall
- 3 Insulation
- 5 Air gap min 25 mm
- 8 EPDM underlay 90 mm
- 11 Rivet SS 4.0 x 19/14
- 16 Aluminium frame system
- 21 Facade board
- a Edge distance min 40 mm
- b Joint width 8 mm



# Setting out and locating fixing positions



Fix aluminium/steel support sections according to suppliers recommendations.

Essential assembly recommendations.

- Always commence with the central fixed fixing point as this takes the weight of the board and any movement in the board is centered on this point. All other peripheral fixings allow for board movement.
- The central fixing hole does not require use of a stand off head.
- Minimum aluminium/steel profile length 3m.
- The aluminium/steel profile butt joints must be aligned to coincide with cladding board joints.  
A board must never cross a joint in the aluminium/steel profiles.
- In the case of two intermediate supporting profiles two central fixing points at the same horizontal level are required.
- Setting of the rivets takes place starting with the central fixing point, then the peripheral fixings above, and finally the peripheral fixing below the central fixing point.

Thickness mm	Board width mm	Wind load kN/m <sup>2</sup>	Max support distance	Max fixing distance along edges	Max fixing distance board middle	Min edge distances		Drill holes in board	
						k mm	h mm	g mm	a mm
8	1250	≤1,75	600	400	400	25 on wood 40 on metal frame	100	Ø7 on wood Ø8 on steel	Ø9
		2,00	600	300	300				
		2,25	400	300	300				
		2,50	400	300	300				
		2,75	400	300	300				

NOTE: FIXING HOLE DIAMETERS FOR CEMBRIT BASEBOARD SHOULD BE PRE-DRILLED 3MM LARGER THAN THE DIAMETER OF THE FIXING.

# Accessories

Cembrit screws for fixing facade boards are made of stainless steel for achieving the highest corrosion resistance. Mushroom head wood screws 4.5 x 36/4 1 are used for wooden structural supports.



The screws have a sharp point and a fast cutting thread which secures a firm fixing with a high pull out value. Furthermore a washer is fixed on the tip of the screw to centralize it and to minimize penetration of water into the screw hole.



An alternative solution for wooden sub-constructions is the wing screw 4.9 x 38 which is equipped with a drill bit and therefore needs no pre-drilling.



For steel sub-constructions stainless self drilling and thread cutting screws 4.8 x 25 are used. Drilling capacity 1.5-2.5 mm



All screws are delivered plain or in the same colour as the facade boards, and with a Torx 20 bit included ready to use.



On aluminium sub-constructions rivets are most commonly used. Cembrit rivets 4.0 x 19/K14 feature an aluminium body with a stainless steel mandrel. At fixing-points a sleeve is used to prevent movement of the board.

In order to allow the boards to move freely at peripheral fixing points when influenced by moisture and temperature changes, a stand-off head must be used ensuring a small space between the board and the rivet head. A stand off head is not required at the central fixing point.



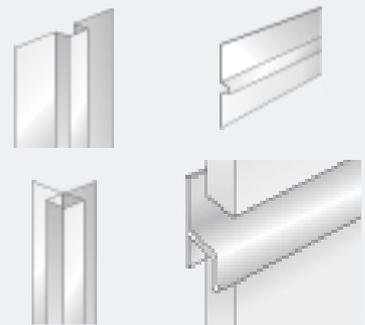
For securing the above mentioned free movement of the boards it is of great importance that the drill hole in the aluminium sub-construction and the drill hole in the Cembrit board are concentric. This is ensured by using an assisting tool.



4.1 mm HSS drill for rivets in aluminium profiles.



Special drill bit like TCT Drill (7-8-9 mm) from Irwin Tools for predrilling in the façade boards.



Aluminium interfaces, joints and internal and external corners are available.



Cembrit EPDM rubber underlay should always be placed under the Cembrit boards using mechanical fixing.

Cembrit boards can be adhesive fixed to a sub structure of planed, impregnated wood or aluminium. Note! The adhesive supplier's recommendations must be followed while using this type of installation. For further information please contact your local Cembrit representative.

# Product Datasheet

Property	Unit	Cembit Edge, Metro	Cembit True, Fusion
Dimension			
Width	mm	1250	1250
Length	mm	2500 / 3050	2500 / 3050
Thickness	mm	8,0	8,0
<b>Physical properties</b>			
Density, dry	Kg/m <sup>3</sup>	1700	1700
Weight	Kg/m <sup>2</sup>	14.6	14.6
<b>Mechanical properties</b>			
Bending modulus of elasticity			
Dry E-module with grain	GPa	8	8
Dry E-module across grain	GPa	7	7
Wet E-module with grain	GPa	7	7
Wet E-module across grain	GPa	5	5
<b>Bending strength</b>			
Dry with grain	MPa	24	24
Dry across grain	MPa	18	18
Wet with grain	MPa	15	15
Wet across grain	MPa	12	12
<b>Interlaminar bond</b>			
Dry	MPa	min 0.5	min 0.5
Wet	MPa	-	-
<b>Impact strength (Charpy)</b>			
Dry with grain	kJ/m <sup>2</sup>	3.5	3.5
Dry across grain	kJ/m <sup>2</sup>	2.5	2.5
<b>Thermal properties</b>			
Heat conductivity	W/m °C	0.4	0.4
Coefficient of thermal expansion	mm/m °C	0.008	0.008
Temperature range	°C	Max. 80	Max. 80
Frost resistance	Cycles	>100	>100
<b>Hygrothermal properties</b>			
Water absorption (wet over dry)	%	12,0	16,0
Wet-dry-wet (max)	mm/m	3	3
<b>Water vapour transmission properties (23°C - 0/99 %RH)</b>			
Vapour permeability	ng/m <sup>2</sup> s Pa	200	200
Vapour transmission resistance	Gpa s m <sup>2</sup> /kg	5.0	5.0
Vapour transmission resistance	s/m	36.000	36.000
Vapour resistivity	MNs/gm	625	625
Vapour resistance factor, μ		140	140
<b>Tolerances (ref. EN 12467)</b>			
Thickness	mm	±0.8	±0.8
Length	mm	±3	±3
Width	mm	±2	±2
<b>Other properties</b>			
pH base board		11	11
Category, Class	EN 12467	NT A3 I	NT A3 I
Fire rating	EN 13501	A2, s2-d0	A2, s1-d0



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The company's policy is one of continuous improvement. Cembrit Limited therefore reserves the right to alter specifications at any time and without notice.

As with all manufactured materials, colours and textures of claddings may vary according to light and weather conditions. It is advisable to ask for samples of material prior to specification and purchase.

Owing to this and limitations of the printing process, colours of claddings in this brochure may only be taken as indicative.

Please ensure that you have the latest version of this brochure by checking that the publication date on the top right of the front cover corresponds with the downloadable version on our website.

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