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ceramapanel

COMPRESSED FIBRE CEMENT FACADE / MANUFACTURED BY VALCAN

TECHNICAL INFORMATION





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ABOUT THIS MANUAL

This manual has been developed to effectively assist fabricators and contractors to work with Fairviews Fibre Cement Panel. Ceramapanel.

Due to the uncontrollable conditions and methods of job scope, as well as the variable skills and judgment of users/installers and the quality of equipment, tools, etc., the suggestions and recommendations contained in this manual are provided without warranty.

The information and recommendations contained herein are believed to be correct at time of publishing 01/08/2019. Fairview reserves the right to revise the contents of this manual.



COMPANY & BACKGROUND

Valcan specialises in the design, manufacture and distribution of a suite of quality facade solutions throughout the United Kingdom, Australia and North America.

With almost 30 years of experience in the facade industry, we are dedicated to consistently facilitating the successful delivery of innovative facades that meet the requirements and vision of each project.

With one of the largest stock holds in the UK, we have the ability to ensure a consistent and timely supply to our dedicated installer network, in addition to this our exible and innovative approach allows us to work closely with our clients on each project to deliver the best

possible outcome. Valcan continues to develop our range of facade solutions and maintain a high level of service and support to the construction industry.

OUR MISSION

An innovative and productive organisation, consistently delivering industry leading facade solutions, renowned for excellence of product and superior customer service.

OUR VISION

To lead the industry through facilitating the successful delivery of innovative facade solutions, which stimulate the creativity of building design.



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ABOUT CERAMAPANEL

Ceramapanel is a through coloured compressed fibre cement façade panel that comes in 8mm, 10mm or 12mm thickness, available in A2-s1, d0 or A1 rating as required.

This is both an aesthetically appealing and cost effective cladding solution offering a truly natural look. Ceramapanel is manufactured by Fairview for distribution across the UK & Europe.

The application of these prefinished fibre cement cladding sheets is limitless. Ceramapanel is an excellent acoustic dampening solution in high demand for sound-proofing and has been used for International Airports and tunnel linings across the globe for this very reason.

THROUGHOUT ITS HISTORY, CERAMAPANEL HAS BEEN PROVEN TO HAVE EXCELLENT CHARACTERISTICS IN MANY APPLICATIONS



ADVANTAGES OF CERAMAPANEL

Additional advantages include:

- Low maintenance
- Robust durability
- Cost effective
- No onsite finishing required
- Environmentally friendly coating systems
- Graffiti and scratch resistant
- Very high strength and impact resistance
- Proven performance in harsh environments globally
- Short lead times and fast installation
- Panels supplied with pre-squared edges



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THE CERMAPANEL FAÇADE SYSTEM
HAS BEEN DESIGNED TO BE USED FOR
EXTERNAL CLADDING BUILDINGS

DESIGN FEATURES

- Unlimited colour range
- Environmentally friendly coating system
- Robust durability
- Tested weather resistance
- Low maintenance
- Available in A1 and A2-s1, d0 fire ratings

CONSTRUCTION FEATURES

- Cost effective
- Dimensionally accurate panels
- Quick lead times
- Fast installation
- Easily fabricated
- Panel Thickness 8mm,10mm and 12mm available

The surface of Cermapanel may show variations in tone, appearance and white flecks which adds to natural aesthetics of the material. The porosity of Cermapanel allows the panels appearance to change with wet weather conditions and when dried out return to the original colour/tone. Each panel is naturally unique and it is recommended that over large projects, panels are mixed from pallets.



ARCHITECTS NATURAL CHOICE

DESIGNING WITH CERMAPANEL

Ceramapanel façade materials can be transformed in to many shapes and sizes to suit your building project. The materials can be used on either the interior or the exterior to create stunning natural designs. Panels can be perforated and fabricated to create unique pattern designs.



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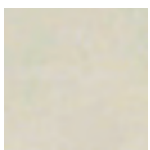
FABRICATION CAN BE AS SIMPLE OR AS COMPLEX AS REQUIRED. CERMAPANEL PROVIDES A WIDE SCOPE FOR BEING CREATIVE. FIBRE CEMENT PANELS MAINTAIN THE LOOK OF NATURAL STONE EFFECTS WHILST GIVING A MODERN EDGE.



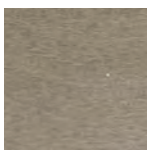
NATURAL COLOURS

Ceramapanel Natural range of 13 colours are through coloured panels that resemble natural/earth tones, these boards may contain white flecks which is a natural feature and add to the aesthetic of the panel. Natural range colours are available in the following finishes; Natural Textures Raw, Natural Textures Touch, Natural Textures Sandblasted, Natural Textures Shotsawn, Contour Groove and Contour Lines finishes.

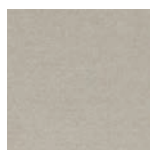
Ceramapanel Natural: Natural cement finish



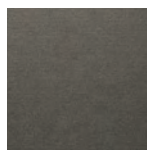
Natural 1001
Bleached Cotton



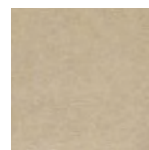
Natural 1011
Rain Cloud



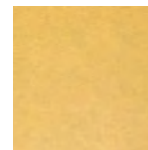
Natural 1021
Light Slate



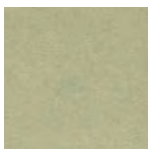
Natural 1031
Charcoal



Natural 1041
Linen



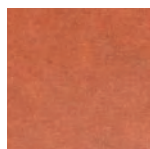
Natural 1051
Sandcastle



Natural 1061
Eucalyptus



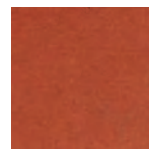
Natural 1071
Warm Tile



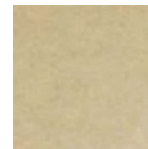
Natural 1081
Hearth Brick



Natural 1091
Cappuccino



Natural 1101
Burnt Orange



Natural 1111
Vanilla



Natural 1121
Sky Blue



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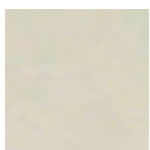
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NATURAL+ COLOURS

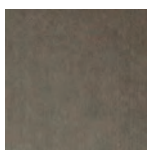
Ceramapanel Natural+ range of 13 colours are through coloured panels with an alkali-resistant coating using a UV polymerizing system to make them resistant to graffiti.

The Natural+ range panels are easier to clean and maintain for years. Natural+ range colours are currently only available in Natural Textures Raw only.

Ceramapanel Natural+: Includes an anti-graffiti coating which gives a slight shine and much richer tone of colour



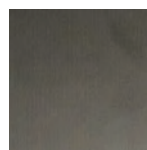
Natural+ 2001
Limestone



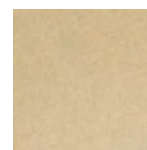
Natural+ 2011
Shadow Rock



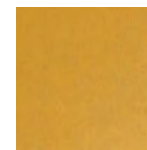
Natural+ 2021
Pebble



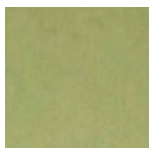
Natural+ 2031
Chalk Board



Natural+ 2041
Hessian



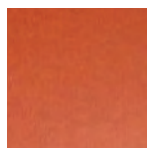
Natural+ 2051
Ripe Mango



Natural+ 2061
Somerset Apple



Natural+ 2071
Fired Clay



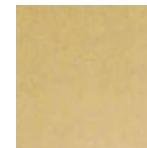
Natural+ 2081
Burnt Orange



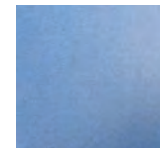
Natural+ 2091
Butterscotch



Natural+ 2101
Paprika



Natural+ 2111
Sawdust



Natural+ 2121
Glacier Blue



FINISHES



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CERMAPANEL NATURAL TEXTURES RAW

The Textures Raw finish from the Ceramapanel range is a flat panel. This is available in all 26 colours comprising of the Natural and Natural+ ranges. The Natural coloured panels may have small naturally occurring white flecks and sanding lines from the production process which add to the aesthetic appeal of the product. The Natural+ colours in the Raw range give a more modern finish in flat, through coloured panels.

CERMAPANEL NATURAL TEXTURES TOUCH

Textures Touch is a very popular finish that gives a very subtle but noticeable riven appearance which runs the length of the panel which has just enough depth to create a shadowed effects. The Textures Touch finish is available in 8mm, 10mm and 12mm thicknesses and all 13 colours from the Natural range.





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CERMAPANEL NATURAL TEXTURES SANDBLASTED

Textures Sandblasted panels have the appearance of a sanded surface that is smooth to the touch and reflects in harmony the surrounding environment. The Textures Sandblasted finish is available in 8mm, 10mm and 12mm thicknesses and in natural colours.

- 1101 Rain Cloud
- 1021 Light Slate
- 1041 Linen
- 1061 Eucalyptus
- 1071 Warm Tile
- 1081 Hearth Brick
- 1191 Cappuccino
- 1101 Cinnamon
- 1111 Vanilla

CERMAPANEL NATURAL TEXTURES SHOTSAWN

Textures Shotsawn panels are finished with a pitted but smooth finish to the façade system. The Textures Shotsawn finish is available in 8mm, 10mm and 12mm thicknesses and comes in colours from the Natural range.

- 1101 Rain Cloud
- 1021 Light Slate
- 1041 Linen





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CERMAPANEL NATURAL CONTOUR GROOVE

Contour Groove panels have shallow channels running the length of the panels that are machined into the face a set depth. Like the Textures Touch panel, these channels help to create shadows across the façade to create a changing appearance throughout the day and night. Contour Groove panels are available in 10mm and 12mm thicknesses and all 13 colours from the Natural range.

CERMAPANEL CONTOUR LINES

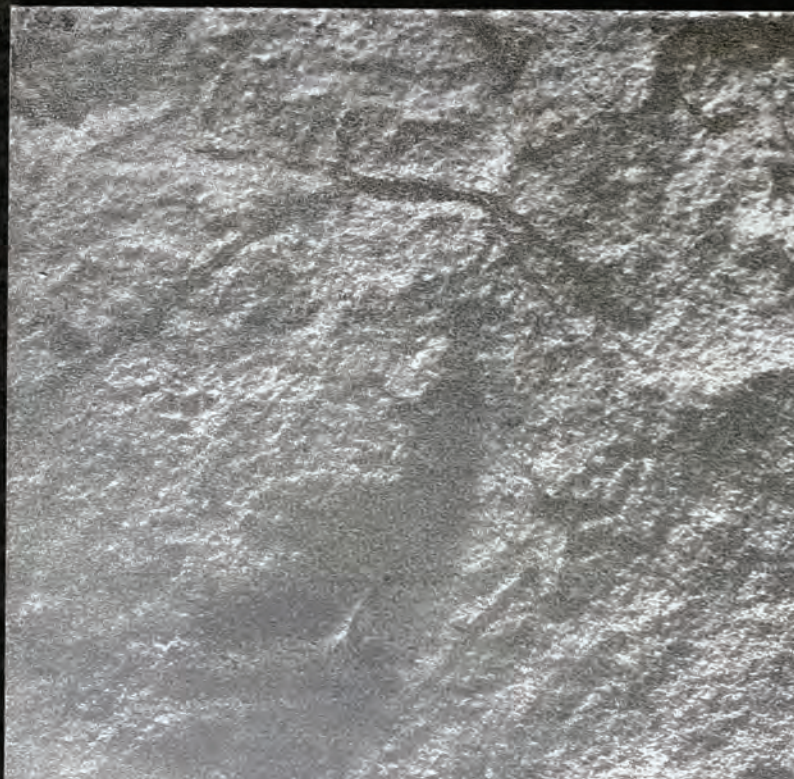
Contour Lines panels have shallow channels running the length of the panels that are machined into the face, these lines are spaced wider apart than those on the Contour Groove finish and help to give the appearance of planks installed on the façade. Contour Lines panels are available with the Textures Raw or Textures Touch surface finish to further accentuate the plank appearance. Contour Lines panels are available in 10mm and 12mm thicknesses and all 13 colours from the Natural range. Customised finish is also available in the Contour Lines range, for more information visit www.valcan.co.uk





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CERMAPANEL PRINTED

Ceramapanel Printed gives you the edge on creating something unique for your project. Your selected design or photo* is printed direct on to our panels in your colour choice.

*Artwork must be provided in the correct format and resolution required.

CERMAPANEL PAINTED

The Painted range gives you the option to have a compressed fibre cement façade finished in any colour you choose. These panels are available in any colour from RAL or Pantone ranges and include metallic options. Ceramapanel Painted panels are available in 8mm, 10mm and 12mm thickness options on the flat raw panels.





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FIRE & SPECIFICATION

Annex A: Cladding element specifications

STANDARD DIMENSIONS ⁽²⁰⁾ AND GEOMETRY ⁽²¹⁾		
Characteristics	Nominal value	Tolerance (Level 1, classifications according to EN 12467:2016)
Length	2500 – 3000 - 3050	±2 mm
Width	1200 - 1250	±1 mm
Thickness for smooth sheets	8 – 10 - 12	±0.2 mm
Squareness of edges		2 mm/m
Straightness of edges		0.1 %
Nominal weight (Kg/m ²)		14.4 (8 mm)
		18 (10 mm)
		21,6 (12 mm)
PHYSICAL PROPERTIES		
Density		1600 ± 50 Kg/m ³
MECHANICAL PROPERTIES		
E modulus of elasticity (dry)	longitudinal	14 GPa
	transversal	12 GPa
E modulus of elasticity (wet)	longitudinal	11 GPa
	transversal	9 GPa
Bending strength (wet) – untreated sheet		≥ 18 MPa
Bending strength (wet) – hydrophobic treated sheet and acrylic coated (treated sheets)		≥ 24 MPa
Bending strength (dry)	longitudinal	32 MPa
	transversal	22 MPa
Compressive strength		40 MPa
Resilience (Charpy test) – According to EN 179-1:2010	longitudinal	4,3 kJ/m ²
	transversal	3,1 kJ/m ²
HYGROMETRICAL PROPERTIES		
Natural humidity		10 ÷ 15 %
Max water absorption* – untreated sheets		25 ± 2 %
Max water absorption* – hydrophobic treated sheets (treated sheets)		9 ± 3 %
Max water absorption* – acrylic coated sheets (treated sheets)		3 ± 2 %
Moisture movement – Relative humidity change from 30% to 90%	longitudinal	0,7 mm/m
	transversal	0,8 mm/m
THERMAL AND WATER VAPOUR PROPERTIES		
Vapour resistance factor, μ – According to EN 12572:2016		320
Thermal conductivity – According to EN 12664:2002		0,42 W/mK
Thermal expansion coefficient - According to EN 10545-8:2014	longitudinal	1,71*10 ⁻⁶ /°C
	transversal	0,58*10 ⁻⁶ /°C
OTHER CHARACTERISTICS		
Superior calorific power (untreated sheets)		0,14 MJ/kg
Fire rating class – According to EN 13501-1		A2 s1 d0
Durability classification – According to EN 12467:2016		category A
Strength classification – untreated sheets – According to EN 12467:2016		class 4
Strength classification – treated sheets – According to EN 12467:2016		class 5

CE marked product according to EN 12467: 2016

(20) Available smaller dimensions with the same thickness

(21) Properties according to EN 12467-1:2013



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APPLICATION



PERFORATION OF CERMAPANEL

Ceramapanel warranty covers perforation up to 10 years as standard based on the following criteria;

- Maximum 20% of panel surface area removed
- Maximum hole diameter 100mm
- Minimum distance of 100mm from the edge and to fixings
- Distance between perforation holes is double the diameter of the hole
- For painted finishes inside edge of perforation can be sealed if carried out in Valcan factory

WARRANTY

Valcan warrants Ceramapanel material for 10 years from the date of purchase. The Ceramapanel will be free from defects in materials and manufacture, subject to the conditions outlined in the warranty document.

For the warranty to be effective, the Ceramapanel must be installed strictly in accordance with the recommended installation methods.



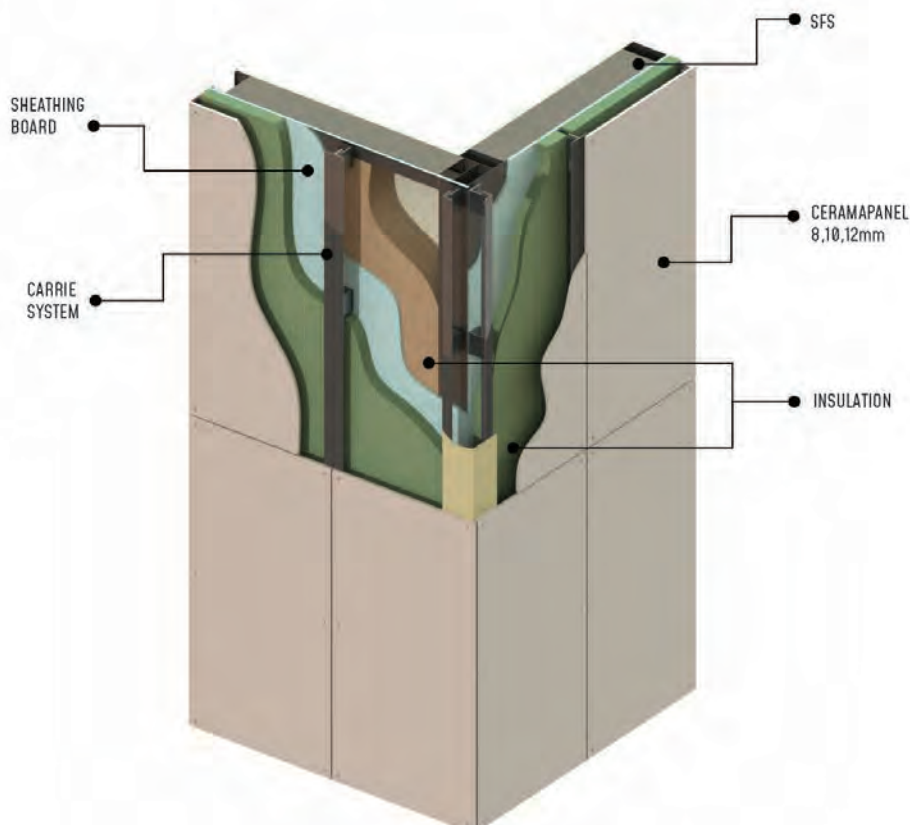
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IMPERMEABLE FIBRE CEMENT BOARD / MANUFACTURED BY VALCAN

RIVET FIX ASSEMBLY

Use 5.1mm drill bit for fixed points and 9.4mm bit for sliding holes for rivet install using 5mm diameter rivets. Fixings should be spaced 45-70mm from horizontal edge and 25-50mm from vertical edge. Pre-cut and drill all panels. Attach a support rail to the carrier system with a clamp, this will be used to rest panels on while fixing (this is removed once panels installed). Rest the pre-drilled panel on the support rail and starting with the 2 fixed points, use a centralising tool to drill the 4.9mm diameter hole in the carrier system.

When using rivets ensure that you also use a nosepiece adapter to prevent over tightening rivets. Once both fixed points are installed, work over the panel for the sliding centres,

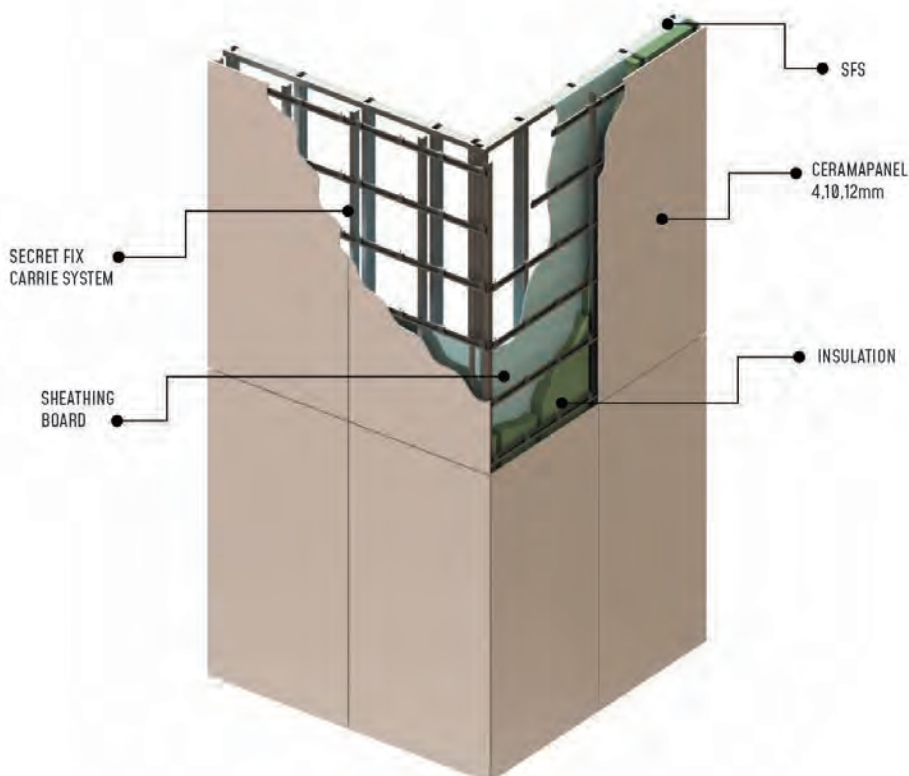




SECRET FIX ASSEMBLY

Keil, Fischer, SFS fixings can be used to secret fix 10mm or 12mm panels to the aluminium carrier system. The panels have factory drilled undercut fastener holes in the back of the panels – hanging brackets are attached to the back of the panel using the chosen undercut fixing system. The supplier of the aluminium support system will provide required calculations for the location of fixings and overall design holes should be drilled in factory conditions at the positions specified by the design engineer or carrier system suppliers calculations.

A minimum of 50mm should be left from the edge of the panel for fixings. If a hole is drilled in the wrong place, new hole should be drilled at least 20 mm from original hole. It is recommended to impregnate the holes of any site drilled panels with Ceramapanel Sealant only for Natural and Natural+. It is good practise to apply sealant to the holes of factory drilled panels too to prevent water ingress on projects and especially those in high moisture locations. It is important to ensure that once panels are drilled for secret fixing they are stored with the holes facing down to prevent moisture pooling.





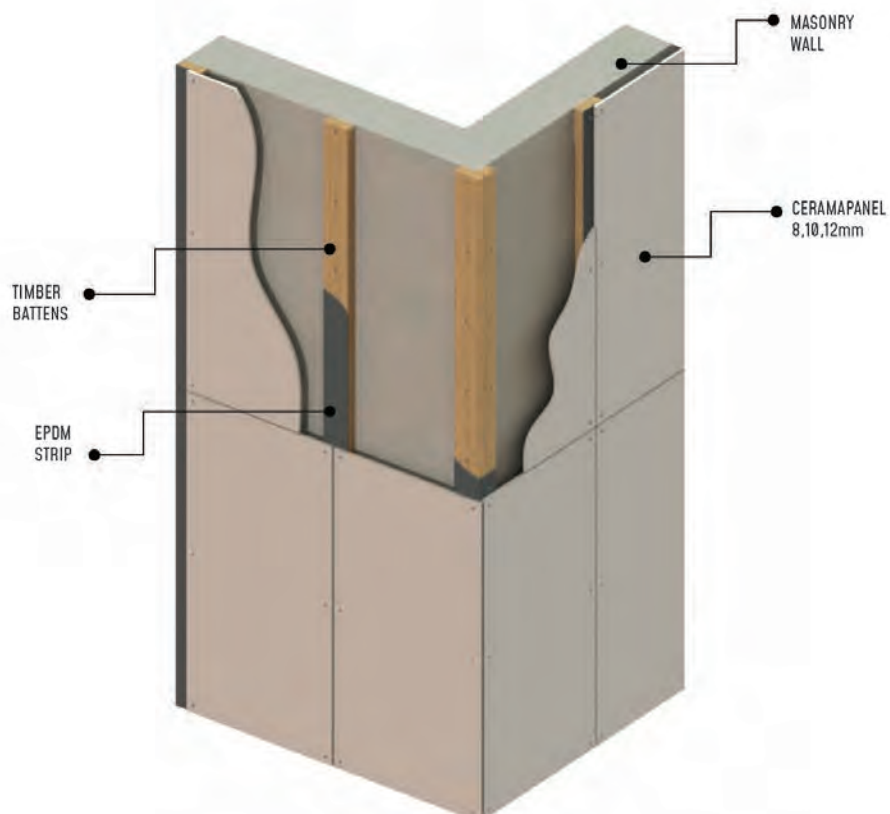
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TIMBER FIX ASSEMBLY

EPDM should be located on the support frame timbers

For screw fix using 4.8mm diameter screws, use 4.9mm drill bit for fixed points and 9.4 for sliding. Fixing should be spaced 45-70mm from horizontal edge and 25-50mm from vertical edge. Position the panel against a support rail and timber battens, adjust to correct line and clamp into place. Screw collars should be installed into each hole on Painted and Natural+ range boards as this gives extra protection to the top coat to prevent peeling. Start from central fixing holes and work outwards to screw fix the panel in place.





WORKING WITH CERMAPANEL



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STORAGE & HANDLING

STORAGE - Panels should be stored flat on pallets in dry conditions with covers retained on the pallets to protect from weather and other works being carried out. Stacks of sheets should be no more than 500mm and no more than 5 stacks on top of each other. Pallets should be stacked to allow ventilation, condensation with in the packaging can be in issue when ambient conditions are warm and packaging/storage conditions do not allow for ventilation – if moisture is allowed to penetrate and stay between sheets, permanent efflorescence staining may occur. If sheets are removed from pallets, these should be stored flat on bearers spaced no more than 600mm to give correct ventilation. Panels are delivered with foam sheets between sheets and this should not be removed until panels are to be processed - always ensure after processing that the foam sheet is replaced between sheets when panels are being stored or transported.

HANDLING - Panels should be lifted off one another rather than moved across each other as scratching may occur. For carrying panels, stand them up on the long edge and lift panels with a person each end, ensure that the face is away from any risk of scratching.

TRANSPORT - Panels should be transported under a waterproof cover on level pallets securely strapped into place to prevent movement. Ensure that strapping is not tight enough to cause damage to panels.

When unloading panels from delivery vehicles, panels should be unloaded on pallets rather than individual sheets. Unloading should be done using suitable forklifts, if a crane is to be used, ensure that the weight is equally spread to prevent slipping and wide straps are used to assist in spreading loads.



FABRICATION

Ceramapanel [like all fibre cement panels] absorb a certain amount of moisture, on the Natural range of panels this can breathe through the face/rear of the boards. The Natural+ panels have a coating on the panel that resists graffiti, this coating also prevents moisture ingress and subsequently egress – it is important that once panels are cut or drilled, sealant should be applied to the cut/drilled faces as moisture ingress that can not get out the panel will cause dark spots in the panels.

TOOLING - When cutting using saw blades, the blade should extend approximately 5mm below the panel. Guidance for blades as follows – other blades may also be suitable and results may vary depending on tooling and machine used. It is possible to cut Ceramapanel on CNC machines, recommendations from tooling or machine manufacture should be sought.

BLADE DIAMETER	BLADE THICKNESS	BOREHOLE	NUMBER OF TEETH	SAW SPEED (RPM)
160mm	2.4mm	20mm	4	4000
190mm	3.2mm	20mm	4	3200
225mm	3.2mm	30mm	6	2800
300mm	3.2mm	30mm	6	2000



FABRICATION

CUTTING - Where possible, it is recommended that cutting should be carried out off site. Only cut 1 sheet at a time and set the blade depth for 5mm below the panel, sheets should always be cut face down using diamond tooth blade for fibre cements. Once panels are cut, it is recommended to sand/chamfer the decorative edge/corner or the panels to remove sharp arris after - this reduces the possibility of damage and improves their appearance. Edges can be abraded using low grit sandpaper or similar. Once cut wipe away and dust using a dry microfiber cloth. On the Natural+ range of boards, after cutting sealant should be re-applied to the cut faces of the boards

DRILLING - Drill panels 1 at a time using hardened steel bits.

All panels should have 2 fixed points regardless of size and the remaining fixings as sliding points to allow for movement. Fixed points should be located on separate carrier rails and located as near as possible to the horizontal central line as, if no central row of fixings are available, use the nearest row. If more than one rail is available behind panels, use the centre most rails for fixed points. On panels with no centre rails, the standard T rails should be swapped out for 2 separate L rails to prevent fixings of adjacent panels to same carrier profile. Another alternative is to use a top-hat profile for fixing. For more information or typical details visit www.valcan.co.uk



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