VALCAN

The Defining Standard

CERAMAPANEL TECHNICAL INFORMATION

A1 A2

A1 or A2 rated to BS EN13501

EOTA®

ceramapanel®

Compressed Fibre Cement Facade

CONTENTS

3. ABOUT THIS MANUAL
4. COMPANY & BACKGROUND
5. ABOUT CERAMAPANEL
6. ADVANTAGES OF CERAMAPANEL
7. DESIGN & CONSTRUCTION FEATURES
9. DESIGNING WITH CERAMAPANEL
10. COLOURS
12. FINISHES
13. CERAMAPANEL NATURAL TEXTURES RAW
14. CERAMAPANEL NATURAL TEXTURES TOUCH
15. CERAMAPANEL NATURAL TEXTURES SANDBLASTED
16. CERAMAPANEL NATURAL TEXTURES SHOTSAWN
17. CERAMAPANEL NATURAL CONTOUR GROOVE
18. CERAMAPANEL LINES
19. CERAMAPANEL PRINTED
20. CERAMAPANEL PAINTED
22. FIRE & SPECIFICATION
25. PERFORATION
25. WARRANTY
27. RIVIT FIX ASSEMBLY
28. SECRET FIX ASSEMBLY
31. STORAGE & HANDLING
32. FABRICATION

ABOUT THIS MANUAL

This manual has been developed to effectively assist fabricators and contractors to work with Valcan's 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 the time of publishing 16/11/2021.

Valcan 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 façade 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 façades 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 flexible 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 façade solutions and maintains a high level of service and support to the construction industry.

OUR MISSION

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

OUR VISION

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

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.

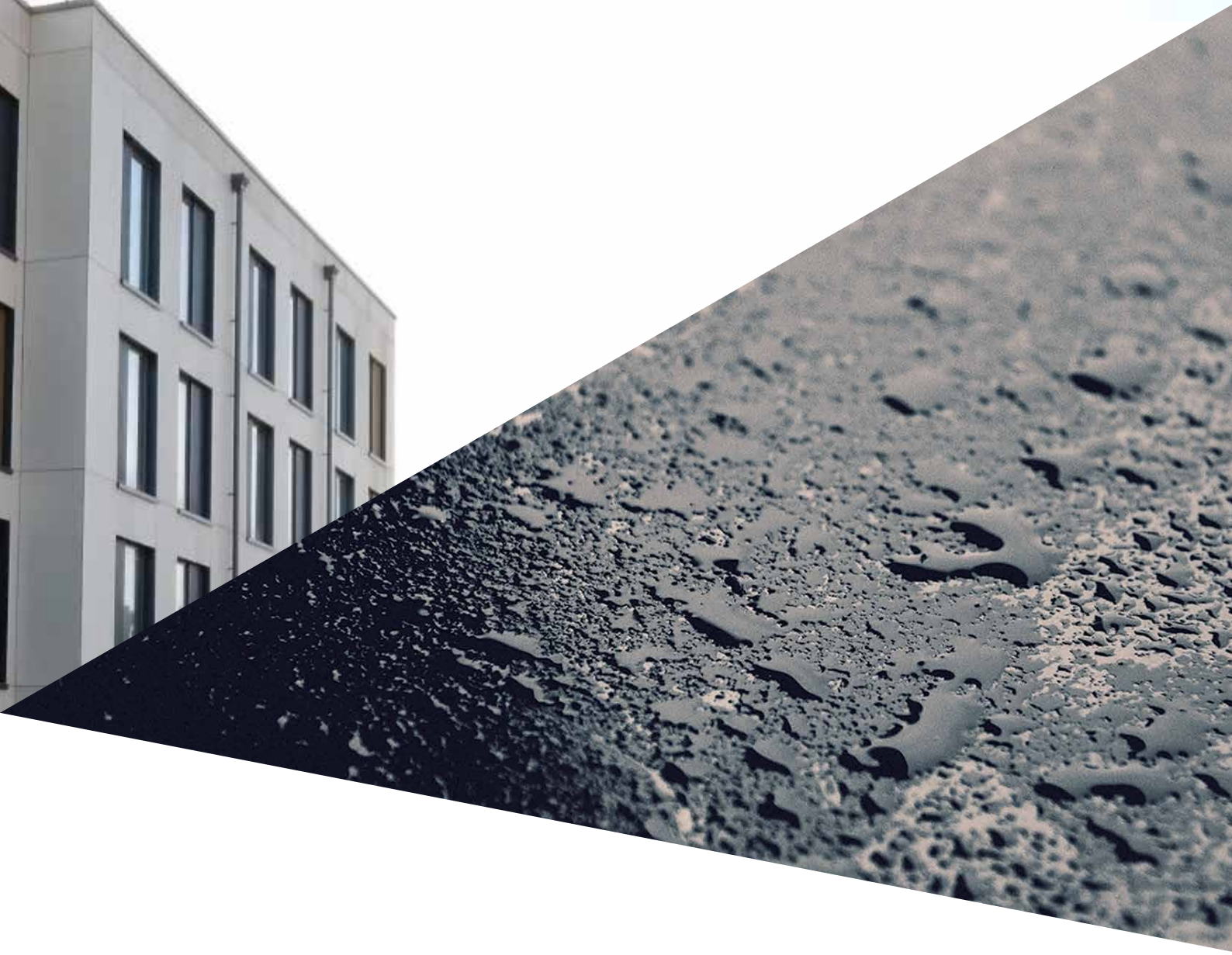
The application of these prefinished fibre cement cladding sheets is limitless; Ceramapanel is an excellent acoustic dampening solution in high demand for sound-proofing and has been used for International Airports and tunnel linings across the globe for this very reason.

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



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

The surface of Ceramapanel may show variations in tone, appearance and white flecks which adds to the natural aesthetics of the material. The porosity of Ceramapanel 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.

CONSTRUCTION FEATURES

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

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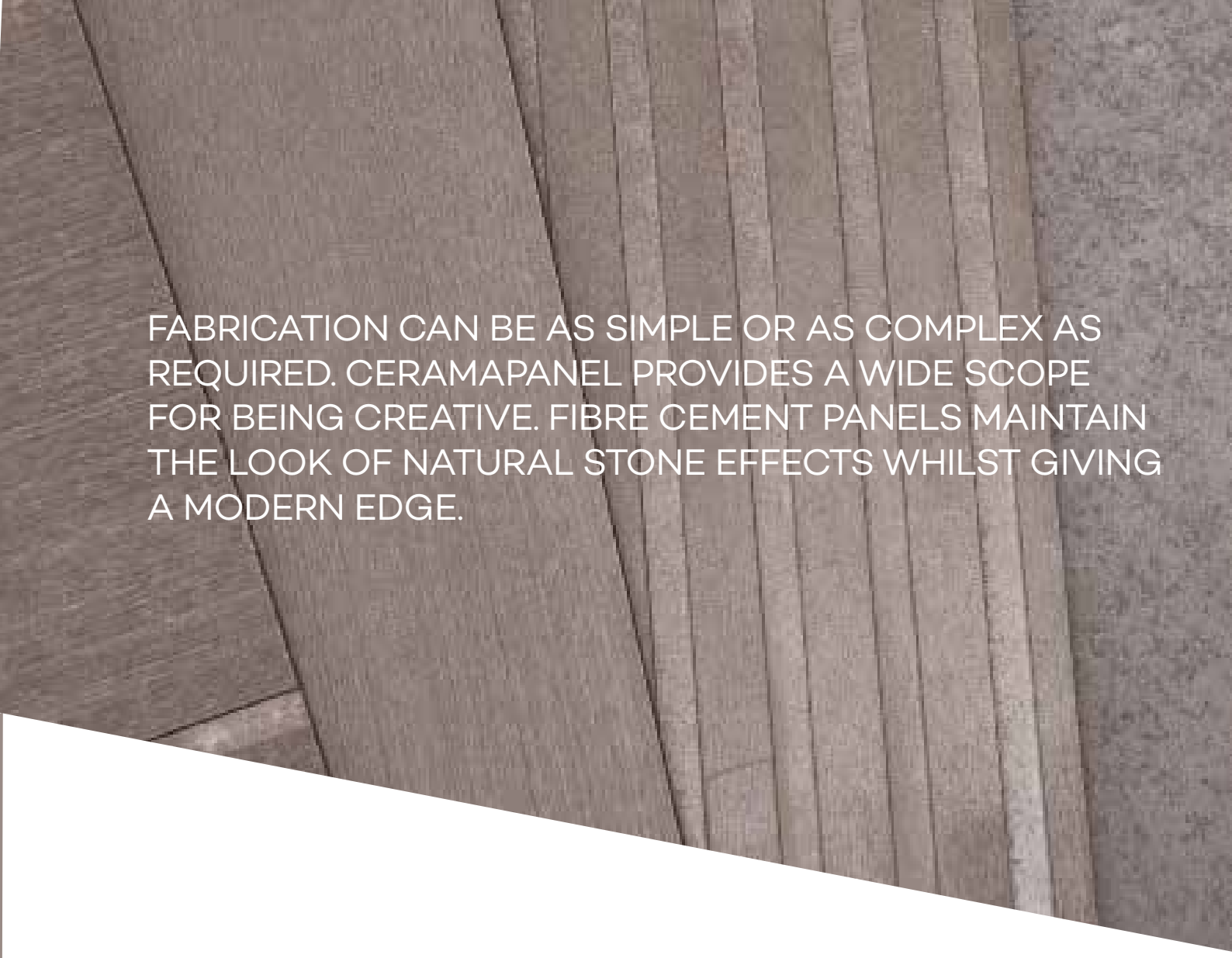
ARCHITECTS NATURAL CHOICE



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

DESIGNING WITH CERAMAPANEL

Ceramapanel façade materials can be transformed into 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.

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 adds to the aesthetic of the panel.

Natural range of 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 1121
Sky Blue

Natural 1061
Eucalyptus

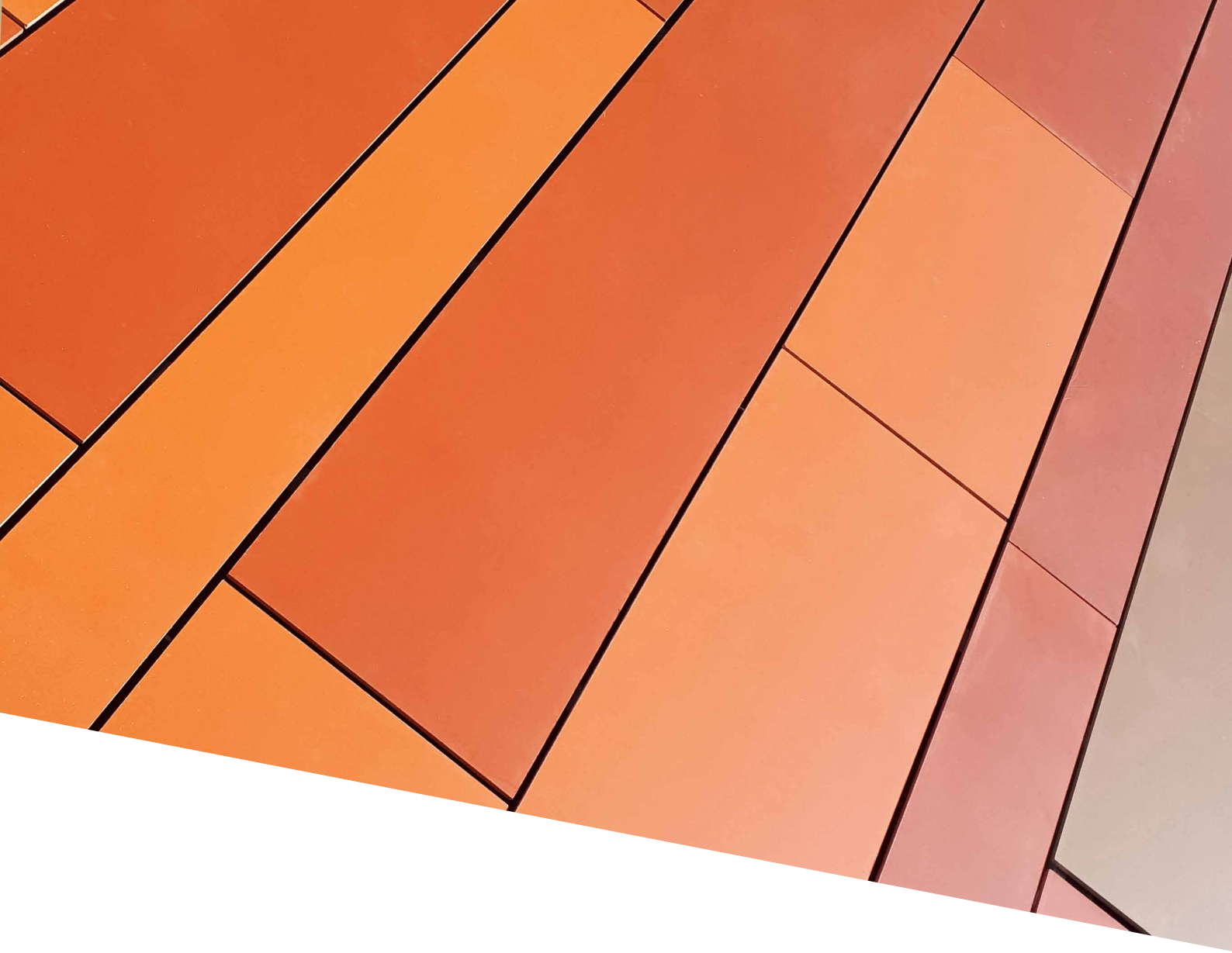
Natural 1071
Warm Tile

Natural 1081
Hearth Brick

Natural 1091
Cappuccino

Natural 1101
Burnt Orange

Natural 1111
Vanilla



NATURAL+ COLOURS

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

Natural+ 2001

Natural+ 2011

Natural+ 2021

Natural+ 2031

Natural+ 2041

Natural+ 2051

Natural+ 2121 Glacier Blue

Natural+ 2061

Natural+ 2071

Natural+ 2081

Natural+ 2091

Natural+ 2101

Natural+ 2111 Sawdust

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FINISHES

CERAMAPANEL 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.

CERAMAPANEL NATURAL TEXTURES TOUCH

Textures Touch is a popular finish that gives a subtle but noticeable riven appearance that runs the length of the panel that has just enough depth to create a shadowed effect.

The Textures Touch finish is available in 8mm, 10mm and 12mm thicknesses and all 13 colours from the Natural range.

CERAMAPANEL NATURAL TEXTURES SANDBLASTED

Textures Sandblasted panels have the appearance of a sanded surface that is smooth to the touch and reflects in harmony with 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

CERAMAPANEL 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

CERAMAPANEL NATURAL CONTOUR GROOVE

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

CERAMAPANEL 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. The customised finish is also available in the Contour Lines range, for more information visit **www.valcan.co.uk**

CERAMAPANEL PRINTED

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

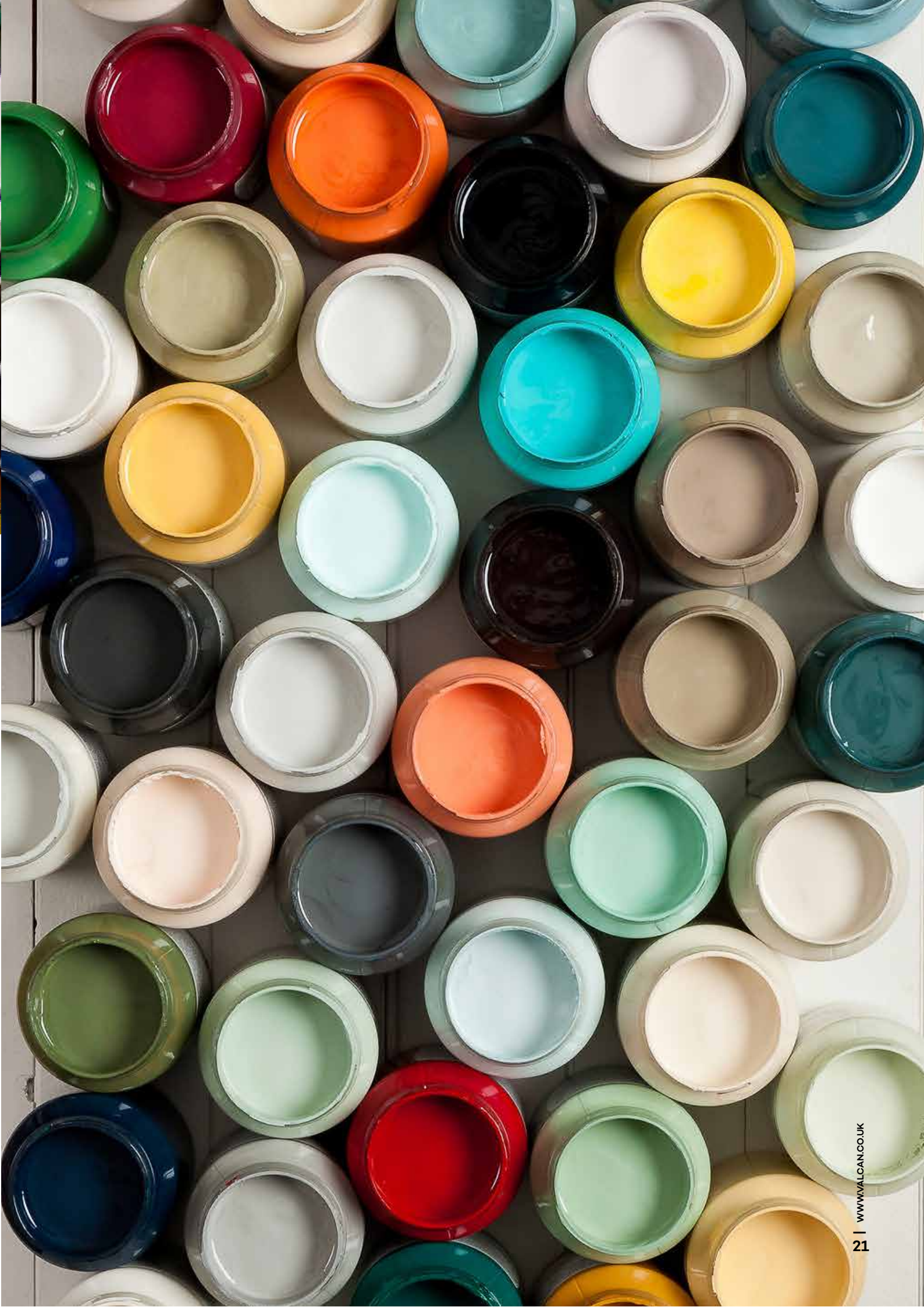
*Artwork must be provided in the correct format and resolution required.

CERAMAPANEL PAINTED

The painted range is available in two fire ratings and options as follows:

Ceramapanel Painted A2
Panels achieve an A2-s1, d0 fire rating and are available in a wide range of colours to suit customers requirements, panels are available with painted edges when cut in our factory removing the need for trims.

Ceramapanel Painted A1
Panels achieve an A1 fire rating in a limited standard range of colours, panels are not finished with painted edges.



FIRE & SPECIFICATION

Ceramapanel is available in two fire ratings depending on colour/finish choice. The Natural, Natural Plus and A1 Painted range are classified as A1 in accordance with BS EN 13501-01, and the A2 Painted and Printed Ranges are classified as A2,s1-d0 in accordance with BS EN 13501-01.

All ranges are suitable for high-rise projects and comply with the Approved Document B Regulation 7 building regs.

Certificates are available to download from the website, and for further information please call 01278 428 245.

A1

A1 rated to
BS EN 13501-01

STANDARD DIMENSIONS AND GEOMETRY			
Characteristics	Nominal value	Tollerance (Level 1, classification to EN12467:2016)	
Length (mm)	2500 – 3000 – 3050	+/- 2	
Width (mm)	1200 – 1250	+/- 1	
Thickness for smooth sheets (mm)	8 – 10 – 12	+/- 0.2	
Squareness of edges		2 mm/m	
Straightness of edges		0.1 %	
Nominal weight (Kg/m²)		14.4 (8mm) 18 (10mm) 21.6 (12mm)	
PHYSICAL PROPERTIES			
Density		1600 +/- 50 Kg/m³	
MECHANICAL PROPERTIES			
E modulus of elasticity (dry)	Longitudinal	14 GPa	
	Transversal	12 GPa	
E modulus of elasticity (dry)	Longitudinal	11 GPa	
	Transversal	9 GPa	
Bending strength (wet) – untreated sheet		> 18 MPa	
Bending strength (wet) – hydrophobic treated sheet		> 24 MPa	
Bending strength (wet) – acrylic coated and treated sheet		> 24 MPa	
Bending strength (dry)	Longitudinal	32 MPa	
	Transversal	22 MPa	
Compressive strength		40 MPa	
Resilience (Charpy test) according to EN179-1:2010	Longitudinal	4.3 KJ/m²	
	Transversal	3.1 KJ/m²	
HYGROMETRICAL PROPERTIES			
Vapour resistance factor, μ - According to EN 12752:2016		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 MK/kg	
Fire rating class – according to EN13501-1		A2-s1, d0	A1
Durability classification – According to EN 12467:2016		Category A	
Strength classification – untreated sheets – According to EN 12467:2016		Class 4	
Strength classification – untreated sheets – According to EN 12467:2016		Class 5	
CE marked product according to EN 12467:2016			

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APPLICATION

PERFORATION

- 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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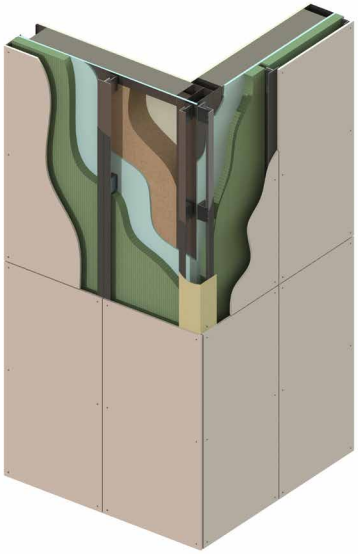
RIVIT FIX ASSEMBLY

anels are installed using colour matched rivets from the Vitrafix range. The system attaches the panel typically back to a Vitrafix VF1 carrier system to achieve a ventilated façade.

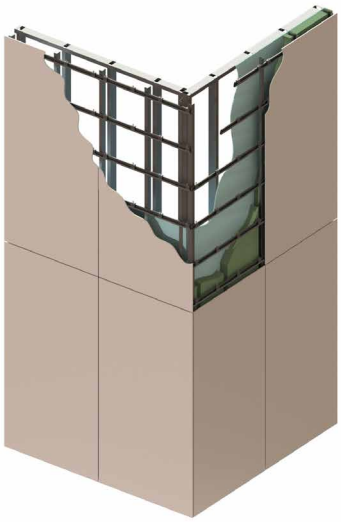
The panels can also be riveted back to the Vitrafix VF2 carrier system as a non-combustible alternative to using a timber batten type sub-frame.

The rivet fix method is a cost-effective installation solution offering fast install speeds.



SECRET FIX ASSEMBLY

To obtain a clean looking finish with uninhibited lines and contours, the secret fix is achieved using an aluminium framing system which consists of a frame and hangers which are fixed to the back of the boards. Although slightly more technical to install it gives the completed install a smooth finish.



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WORKING WITH CERAMAPANEL

STORAGE & HANDLING

STORAGE - Panels should be stored flat on pallets in dry indoor 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 2 stacks on top of each other. Panels should only be delivered to the site when ready for imminent installation, if delivery to the site is required ahead of installation, panels should be stored in a suitable, internal dry location.

Pallets should be stacked to allow ventilation, condensation within the packaging can be an 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, on Painted panels, this may occur in the form of paint blisters.

If sheets are removed from pallets, these should be stored flat on bearers spaced no more than 300mm 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. If panels have been fabricated with secret fix brackets on and are re-stacked on pallets prior to installation, the panel should be fully supported by polystyrene (or similar) blocks rather than using the brackets as spacers/packers.

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 at each end, ensuring 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, the 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 is 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 to 5mm below the panel, sheets should always be cut face down using a diamond tooth blade for fibre cement. 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. Panels should have a minimum of 1 fixed point per panel and the rest sliding points, the fixed point should be central as the panel dimensions allow. If a panel needs to have 2 fixed points by design, these 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 is 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 two separate L rails to prevent fixings of adjacent panels to the 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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