

A1 RATED NON-COMBUSTIBLE FIBRE CEMENT RAINSCREEN CLADDING

Valcan Ceramapanel®











OUR VISION

To lead the industry as an innovative and proactive organisation, consistently delivering non-combustible façade solutions, renowned for excellence of product, product support and superior customer service - the defining standard.



OUR MISSION

To be the market leader in non-combustible façades for high-rise buildings, through design and supply of A1 and A2 rated rainscreen cladding systems, that are easy to buy and fast to install.



OUR VALUES

Our commitment to respect, loyalty, honesty, innovation, responsiveness, and teamwork means that we deliver exceptional products/services that exceed customer expectations, build strong and lasting relationships with our customers and partners, and continuously strive to improve and innovate to better serve our customers' evolving needs.

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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.



VALCAN, YOUR TRUSTED PARTNER IN A1/A2 NON-COMBUSTIBLE CLADDING SOLUTIONS



WHO WE ARE

Valcan is the trading name of Fairview Europe Ltd and we are part of the Fairview global family. Valcan is a developer and manufacturer of rainscreen cladding systems working with clients, insurers, architects and contractors.

We deliver fully tested non combustible A1 /A2 (A2-s1,d0) certified solutions, paired with reliable and technically assured customer service.

With over 20 years of experience in the façade industry through Fairview's global network, we have established a leading position in the market and are now the preferred company by Architects, Contractors and Fabricators.

HISTORY

Valcan initiated its distribution of Vitrabond A2 Aluminium Composite material to the construction industry during the early 2000s. This effort was made possible through the unwavering support of Fairview Architectural, Australia – a partnership that remains robust to this day.

With a solid background in the façade industry spanning over two decades, Fairview Architectural initially catered to the rainscreen market with their flagship product, Vitrabond.

Presently, we offer a diverse range of 10 products, along with a range of complete cladding systems. Our commitment to providing exceptional customer service drives us to continuously improve our processes and offerings.



WHY CHOOSE VALCAN?

At Valcan, we do not design, fabricate, or install products ourselves. Instead, we have a network of trusted partners we collaborate with to ensure your project is completed to the highest standards of quality and safety. These partners, selected for

their expertise, knowledge, and ability to deliver outstanding results, include designers, fabricators, and distributors sharing our commitment to quality, safety, and innovation.

We also have a network of installer partners, carefully chosen for their professionalism, reliability, and commitment to safety. Fully trained and accredited to install our products, they ensure your project is completed to the highest standards.

OUR STRENGTHS

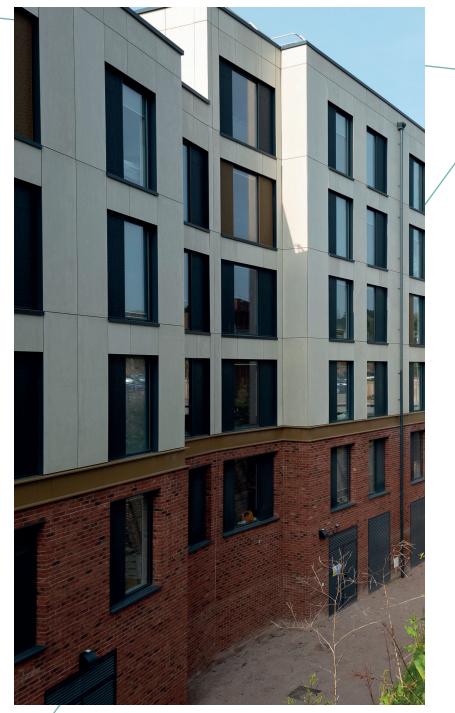
Valcan is renowned for its exceptional dedication to providing top-tier, secure, and innovative solutions in the facade industry. Our principal products and systems boast noncombustibility, earning A1 /A2 fire ratings and setting the gold standard for rainscreen systems.

This commitment to quality is propelled by rigorous research and development, ensuring that every solution we deliver is expertly tailored to cater to each project's unique needs and demands. Whether you're undertaking a new build and recladding projects, Valcan guarantees optimal performance, safety, and integrity in every product.

We take pride in being a supportive partner to our customers, guiding them through each project phase and helping them achieve their objectives.







WHAT IS 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. 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.

Ceramapanel is manufactured by Fairview for distribution across the UK & Europe.

BENEFITS OF CERAMAPANEL®

- NON-COMBUSTIBLE Ceramapanel A1 is A1 fire-rated to BS EN 13501-1 ensuring the highest level of fire safety for your projects.
- **ROBUST AND LONG LASTING** Panels designed for longevity tested to a life expectancy of over 60 years with minimal maintenance requirements.
- REDUCED CARBON FOOTPRINT Ceramapanel A1 has a very low embodied carbon figure of only 19.2 kg of CO2 per m2. For comparison, GRC is 55 Kg of CO2 per m2.
- FULLY RECYCLABLE Any waste material can be shredded which is then mixed with other materials to make road surfaces, making it an eco-friendly choice for construction projects.
- **ON OR OFF-SITE FINISHING** Panels can be prepared and finished on or off-site, ensuring a streamlined and efficient installation process.
- **VIBRANT COLOUR PALETTE** With a diverse range of colours and finishing options, allowing for creative freedom in designs.

QUICK TURNAROUND – Benefit from short lead times and expedited installation processes.

- NATURAL AESTHETICS Unique surface variations in tone and appearance, adding a touch of nature to your projects.
- **GRAFFITI-RESISTANT OPTION AVAILABLE** Natural+ range is coated with an acrylic treatment, ensuring pristine façades even in urban settings.



DESIGN FEATURES OF CERAMAPANEL®

- Unlimited colour range included printed
- 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

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.







CERAMAPANEL® COLOURS

Ceramapanel comes in a total of over 26 colours across two natural through-coloured ranges; the Natural range and the Natural+ range and is also available in a customised Painted RAL range:

The Natural range resembles nature's earth tones and has a much more natural stone-like appearance. The Natural colour range is available in the full textured finishes, RAW, Sandblasted, Shot-Sawn, Touch, Contour Groove and Contour Lines.

The Natural+ range uses the same colours as the Natural range, however this is finished with an alkali-resistant coating using a UV polymerising system to make the sheets resistant to graffiti. This coating gives the colour a deeper, richer tone and allows the panels to be cleaned more easily and maintained for many years. The Natural+ colour range is only available in the Textures Raw finish.

CERAMAPANEL® NATURAL: NATURAL CEMENT





CERAMAPANEL® NATURAL + COLOURS

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



VALCAN The Defining Standard

CERAMAPANEL® FINISHES

Ceramapanel textured range offers a very subtle but effective dimension to an already natural finish for that little extra uniqueness.



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



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 thickness's and all 13 colours from the Natural range.



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 thickness's 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

VALCAN The Defining Standard



NATURAL TEXTURES SHOT SAWN

Textures Shot sawn panels are finished with a pitted but smooth finish to the façade system.

The Textures Shot sawn finish is available in 8mm, 10mm and 12mm thickness's and comes in colours from the Natural range.

• 1041 Linen

• 1101 Rain Cloud

•

1021 Light Slate

NATURAL TEXTURES CONTOUR GROOVE

Natural Contour Groove features 2mm deep grooves spaced 20mm apart.

Custom spacing is available according to design intent.



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.

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 thickness's and all 13 colours from the Natural range.



CERAMAPANEL® PAINTED & PRINTED

CERAMAPANEL® PAINTED

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

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.

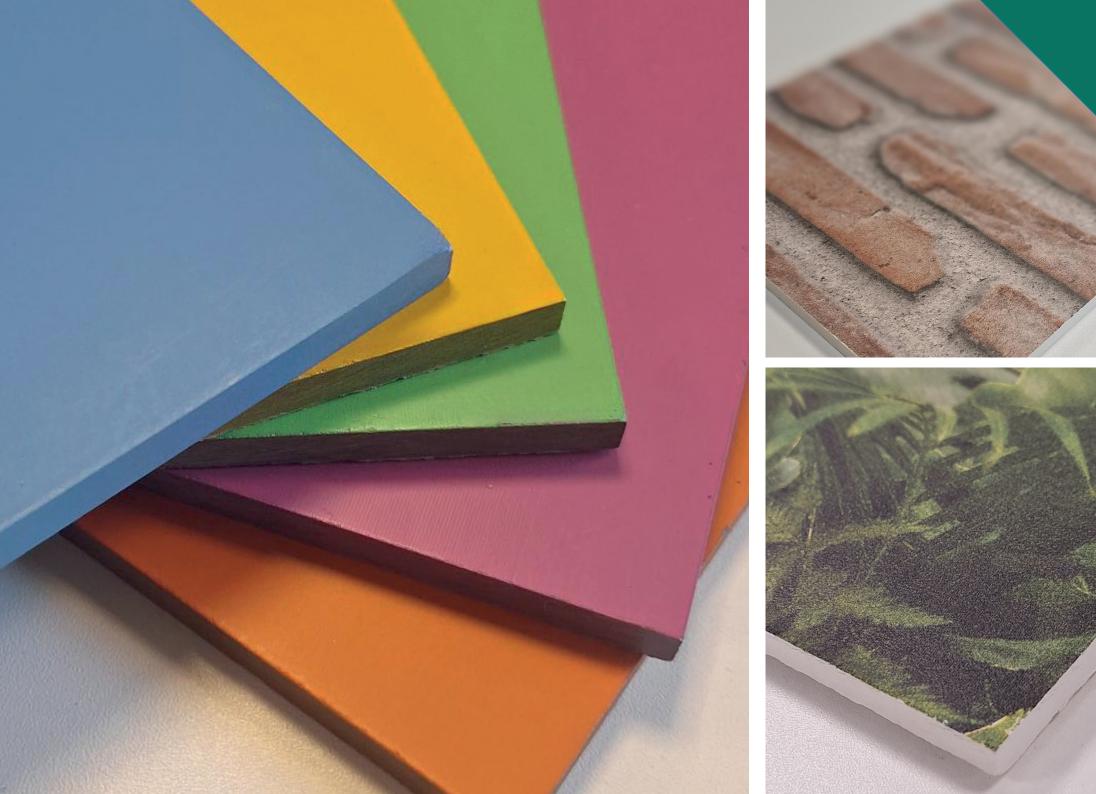
CERAMAPANEL® PRINTED

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.

Panels achieve an A1 fire rating and are available in a matt or gloss finish.

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





CERAMAPANEL® FIRE & SPECIFICATION

Ceramapanel is available in two fire ratings depending on colour/finish choice. The Natural, Natural + 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 regulations.

Certificates are available to download from the website, and for further information please call 01278 428 245 or email enquiries@valcan.co.uk.



STANDARD DIMENSIONS AND GEOMETRY

CHARACTERISTICS	NOMINAL VALUE	TOLERANCE (LEVEL 1, CLASSIFICATION TO EN12467:2016)
Length (mm)	2500 - 3000-3050	+/- 2
Width (mm)	1200 - 1250	+/-1
Thickness for smooth sets (mm)	8 - 10 - 12	+/- 0.2
Squareness of edges		2mm/m
Straightness of edges		0.1%
Nominal weight (Kg/m2)		14.4 (8mm) 18 (10mm) 21.6 (12mm)



PHYSICAL PROPERTIES

CHARACTERISTICS	NOMINAL VALUE	TOLERANCE (LEVEL 1, CLASSIFICATION TO EN12467:2016)
Density		1600 +/- 50Kg/m3

MECHANICAL PROPERTIES

CHARACTERISTICS	NOMINAL VALUE	TOLERANCE (LEVEL 1, CLASSIFICATION TO EN12467:2016)
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

*High MOQ





HYGROMETRICAL PROPERTIES

CHARACTERISTICS	NOMINAL VALUE	TOLERANCE (LEVEL 1, CLASSIFICATION TO EN12467:2016)
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		



CERAMAPANEL® APPLICATION

PERFORATION

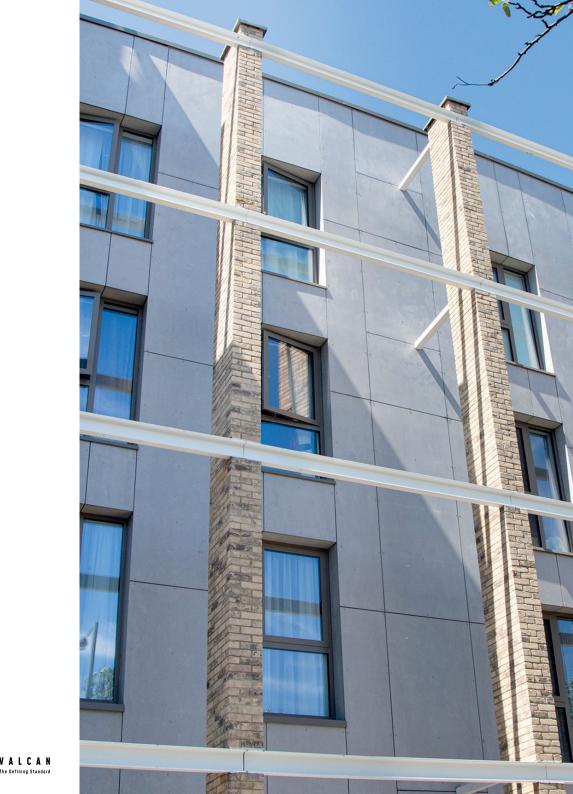
- Maximum 20% of panel surface area removed
- Maximum hole diameter 100mm
- Minimum distance of 100mm from the edge and to fixings
- Distance between perforation holes is double the diameter of the hole
- For painted finishes inside edge of perforation can be sealed if carried out in Valcan factory

WARRANTY

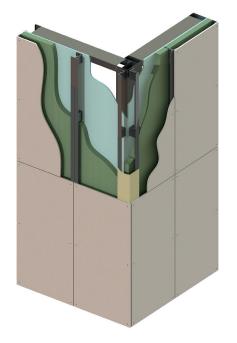
Valcan warrants Ceramapanel material for 10 years from the date of purchase. The Ceramapanel will be free from defects in materials and manufacture, subject to the conditions outlined in the warranty document.

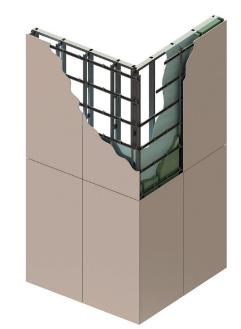
For the warranty to be effective, the Ceramapanel must be installed strictly in accordance with the recommended installation methods.

Warranties are transferable on application - contact <u>enquiries@valcan.co.uk</u> for more information.









RIVIT FIX ASSEMBLY

Panels 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.

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.



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.

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 microfibre cloth. On the Natural+ range of boards, after cutting sealant should be re-applied to the cut faces of the boards.

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

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.



SUSTAINABILITY AT VALCAN: A GREENER FUTURE

At Valcan, we don't just see sustainability as a duty to our environment, we see it as a distinctive business strategy and a dynamic opportunity to innovate.

Our dedication extends to constantly discovering creative ways to recycle and reuse materials, starting with our very own cladding panels.

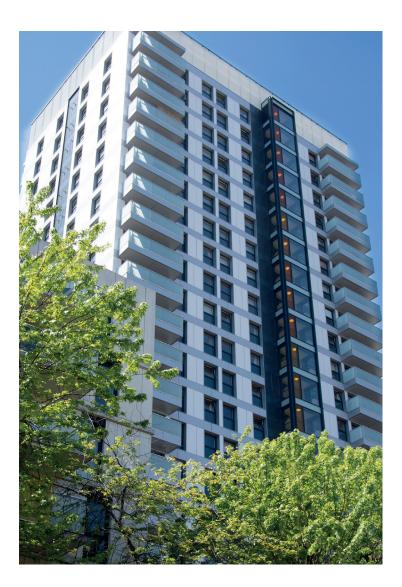
We're particularly thrilled about our initiative of recycling previously installed cladding panels and re-purposing them into vital components of our VitraFix® cladding subframe system.

This strategic approach not only minimises waste but also enables cost-saving in production and contributes significantly to reducing our carbon footprint.

The cycle of sustainability begins with the careful disassembly of the older cladding panels composed of 5000 grade aluminium.

Once segregated, these reusable materials undergo processing and transformation into novel components for VitraFix[®]. Following this, each component is rigorously tested to meet our stringent quality standards.

Our sustainable methods do more than just helping us honour our commitment to the environment; when clients choose Valcan, they're assured that their cladding panels are not just robust and reliable, but they're also making a conscious choice to support sustainability and reduce waste.



Our pioneering stance in the cladding industry is a testament to our innovative strategies for waste reduction.

As we continue to challenge ourselves in exploring new methods of recycling and reusing materials, our focus remains on diminishing our environmental impact and laying the groundwork for a sustainable future.



The EPD is an ISO type III Environmental Declaration acc. ISO 14025 standard As that, the EPD differs in many aspects from ISO type I third-party (independent eco-labels) and type II selfdeclared eco-labels.



Our Vision for a Greener Future:

At Valcan, our goal is to become a greener and more sustainable company by constantly evaluating and improving our operations. We aim to lead the charge in our industry by:

- Continually researching and implementing innovative, eco-friendly manufacturing processes.
- Promoting responsible sourcing of raw materials and engaging with suppliers who share our commitment to sustainability.
- Encouraging our employees to adopt sustainable practices, both at work and in their daily lives.
- Collaborating with industry partners to advocate for better environmental policies and standards.

By taking these steps, we hope to create a positive impact on the environment and inspire others within our industry to follow suit. Together, we can build a more sustainable future for generations to come.

Ecologi	



Partnership with Ecologi:

Valcan has joined forces with Ecologi, a forward-thinking organisation that plants trees and supports community projects worldwide. Through this partnership, we are offsetting our carbon emissions, contributing to reforestation efforts, and investing in global sustainability projects.

Recycling Program for Aluminium Panels:

We believe in the power of recycling and have implemented a recycling program for our aluminium panels. Customers can return old or damaged panels to us, and we will recycle the materials, ensuring that resources are utilised efficiently where waste is minimised.

Ceramapanel - fully recyclable:

Ceramapanel fibre cement can be recycled completely, thanks to specialist companies that handle the waste material. They shred the surplus materials and mix them with other substances to create road surfaces, minimising the demand for new raw materials. This process helps reduce the need for extracting new raw materials, making it an eco-friendly choice for construction projects.



CONTINUING PROFESSIONAL DEVELOPMENT (CPD)



Join our free cladding CPD presentations online via or face to face at your premises.

Our popular CPD focuses on fire safety for buildings over 11m high. Lasts for 1 hour including a round of questions and answers at the end.

This provides a fantastic learning opportunity for architects, installers and construction professionals in the UK.

Topics explained are:

- Introduction To Valcan
- Rainscreen Cladding Overview How It Works
- Fire Regulations ADB Vol 2 Amendments
- How These Amendments Affect Your Project
- How To Comply Following The Ban On Combustible Cladding
- EN13501-01 Classification Explained
- The Difference Between A1 / A2 classifications
- The Golden Thread
- The Building Safety Act 2022
- Testing Options
- Valcan Solutions Fibre Cement, ACM & Aluminium etc.
- Case Studies
- Questions & Answers Session

Book your place

Get in touch with us today and we'll arrange the best date/time:

01278 428245 Call: Email: Website:

enquiries@valcan.co.uk www.valcan.co.uk/cpd







INSTALLATION SUPPORT

We understand the importance of site visits and quality assurance. If needed, we are happy to arrange a site visit to provide on-site guidance and ensure that the installation is progressing smoothly. Alternatively, we are more than willing to review photographs of the installation to offer remote assistance and double-check any crucial details.

Our aim is to make the installation process as straightforward as possible. With our support, guidance, technical assistance, and comprehensive resources, you can trust that our cladding systems are designed for ease of installation. We are dedicated to your success, and we go the extra mile to ensure your project is completed to the highest standards.*

The route to compliance of the Golden Thread includes all parties; from the client through to the final resident. It is important that everyone does their part to create a future proof record complying with building regulations as set out in the Approved Document B (ADB). Sequencing of works, inspections, commissioning, environmental hazards and project record keeping is responsibility of the installer/designer/contractor.

INSTALLER TOOLBOX TALKS

In our pursuit of fostering a cultural change in the industry, we stand at the forefront as advocates for implementing Dame Judith Hackitt's Golden Thread Principles. Our aim is to empower clients who choose Valcan products to embrace these principles effectively.

To ensure that our standards remain uncompromised, we kindly request all prospective installers to take part in Toolbox Talks and provide tangible proof of operating a professionally managed business. This encompasses aspects such as accurate pricing, efficient project completion, and the ability to offer a comprehensive package to clients. Support and Toolbox Talks will be provided on:

- VitraFix[®], Vitradual[®] & Ceramapanel[®]
- Fabrication Techniques
- 🔺 Installation Methods
- A General Housekeeping
- Questions & Answers

To take part in an Installer Toolbox Talk get in touch with us by speaking to your contact directly.

Alternatively, call us on **01278 428 245** or email us at **enquiries@valcan.co.uk** and we'll get you registered for the training course.

*Note: Sequencing of works, inspection, commissioning, and project record keeping throughout the construction process is the responsibility of the building owner in order to comply with building regulations as set out in Approved Document B. Download the document <u>here.</u>









VALCAN

The Defining Standard

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