



## TECHNICAL MANUAL

### EXERAMIC Ceramic Tile Facade System

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#### 1.1 About This Manual:

This manual has been developed to effectively assist fabricators and contractors to work with EXERAMIC. Due to the uncontrollable conditions onsite and different methods of job scope, as well as the variable skills and judgment of installers and the quality of equipment, tools, etc, the suggestions and recommendations contained in this manual are provided without warranty. The information and recommendations herein are believed to be correct at time of publishing.

BLUECHIP reserves the right to revise the contents of this manual without prior notice. Any construction or use of the product must be in accordance with all local zoning and/or building codes and in accordance with the current NCC at the time of use. Except as contained in a written warranty certificate, the supplier does not provide any other warranty, either express or implied, and shall not be liable for any damages, including consequential damages.

#### 1.2 Company Background:

Founded in 2003 by five brothers, BLUECHIP has grown every year since to become one of Australia's leading suppliers of architectural building envelopes. BLUECHIP's product range covers the complete system from the structure out including all types of cladding materials, composite decking, sub-framing, insulation, waterproofing and fixings.

With offices in Sydney, Melbourne and Perth, BLUECHIP has supplied more than 3,000,000m<sup>2</sup> of materials to Australian projects since 2003. Our commitment to innovation and ongoing investment in R&D ensures BLUECHIP will continue to lead the market with BCA/NCC compliant facade solutions in the years ahead.

For architects and consultants, BLUECHIP's wide range of different materials and 'complete-system' approach enables the creation of inspiring high-performance facades. For builders and contractors, BLUECHIP's large local stock, well established supply chains and genuine appreciation for our clients means you can trust us to deliver as promised every time.

#### 1.3 Company Details:

Company: Blue Chip Group Pty Ltd  
ABN: 98 162 282 064  
Locations: Sydney | Melbourne | Brisbane | Perth  
Phone: 1300 945 123  
Email: [sales@bluechipgroup.net.au](mailto:sales@bluechipgroup.net.au)

**Important Note:** This document is not a substitute for project-specific structural engineering. Suitably qualified advice should be obtained for all projects which considers all relevant factors to determine structural loads, spans, fixings, etc, and to ensure suitability and compliance.



## 1.4 Product Description:

### Ceramic Tile Facade System

The EXERAMIC facade system comprises a high-tech extruded ceramic tile installed using the proprietary BICEP bracketry system. The EXERAMIC facade system can also be installed as an insulated system using IROCK non-combustible insulation for high-end projects, decreasing energy costs and CO2 emissions. The EXERAMIC system offers extreme performance against the elements, is fast to install, economical and environmentally friendly. Available in a wide variety of natural finishes, EXERAMIC is an exceptional façade solution.

### Extreme Durability

EXERAMIC tiles are tested to ISO 10545-4 and easily achieve double the standard breaking strength of  $\geq 3.000$  N. EXERAMIC ceramic facade tiles can withstand a huge  $\geq 6.000$  N.

### Precision Manufacturing

Manufactured according to ISO 10545-2, the high-precision extrusion technology used for EXERAMIC ceramic facade tiles means they are rectified on all 4 sides, reducing tolerances to a minimum and ensuring precision installation.

### Non-Combustible

As expected, EXERAMIC ceramic facade tiles are a deemed-to-satisfy non-combustible facade material in accordance with NCC 2022 clause C2D10(5)(i) meaning they can be used internally or externally wherever a non-combustible material is required.

### EPD Verified for Performance

EXERAMIC ceramic facade tiles are eco-sustainable and are a 100% recyclable building material. EXERAMIC ceramic facade tiles have been EPD verified to enable use in the most environmentally sensitive construction projects.

### Eco-Friendly Circular Economy

Heavily focused on the circular economy, the EXERAMIC manufacturing process recovers 100% of the residual material generated during the production process, reintroducing approximately 40% of recycled content into the raw material.

### Naturally Forever

Enriching new and refurbished buildings, EXERAMIC ceramic facade tiles impart an exclusive contemporary character to all projects. They are elegant, natural and look virtually unchanged over an independently declared service life of 50+ years.

### Technical Support

Advanced project support is available to assist with engineering and full facade details for the EXERAMIC system from basic ventilated systems to complete insulated and ventilated facades. Please get in touch to discuss your project in further detail.

### Ventilated & Insulated System

EXERAMIC ceramic facade tiles are installed on the BICEP bracketry system allowing for a ventilated and/or insulated system with varying cavity depths for different insulation thicknesses. Improve your project's thermal and energy efficiency by R3.33+.

## 1.5 More Information:

[EXERAMIC Ceramic Tile Façade System](#)



## 2.1 Physical Properties – Technical Data:

ITEM	STANDARD / TEST	RESULT
Tile Thickness	Actual	20mm
Tile Weight per m2	Actual	<33kg / m2
Tile Sizes & Weight (Approx.)		
▪ 800 x 397mm	Actual	10.48kg
▪ 1000 x 397mm	Actual	13.10kg
▪ 1200 x 397mm	Actual	15.72kg
▪ 1600 x 397mm	Actual	20.96kg
▪ 800 x 600mm	Actual	15.84kg
▪ 1000 x 600mm	Actual	19.80kg
▪ 1200 x 600mm	Actual	23.76kg
▪ 1600 x 600mm	Actual	31.68kg
Water Absorption	ISO 10545-3	≤ 0.5 %
Breaking strength	ISO 10545-4	≥ 6.000 N
Linear thermal expansion	ISO 10545-8	<6.5·10 <sup>-6</sup> °C <sup>-1</sup>
Resistance to thermal shock	ISO 10545-9	Guaranteed
Crazing resistance	ISO 10545-11	Guaranteed
Frost resistance	ISO 10545-12	Guaranteed
Chemical resistance	ISO 10545-13	A/LA/HA
Stain resistance	ISO 10545-14	Class 5

## 2.2 Physical Properties – Standard Tile Formats:



**39,7x80x2 cm**  
15.6"x31.5"x0.8"

**39,7x100x2 cm**  
15.6"x39.4"x0.8"

**39,7x120x2 cm**  
15.6"x47.2"x0.8"

**39,7x160x2 cm**  
15.6"x63.0"x0.8"



**60x80x2 cm**  
23.7"x31.5"x0.8"

**60x100x2 cm**  
23.7"x39.4"x0.8"

**60x120x2 cm**  
23.7"x47.2"x0.8"

**60x160x2 cm**  
23.7"x63.0"x0.8"

## 2.3 Physical Properties – Manufacturing Quality:

The EXERAMIC product, with its unique manufacturing system, can generate different formats and finishes, thus facilitating the creation of landmark architecture. The EXERAMIC system guarantees functionality and a high aesthetic content in every project and is produced exclusively in Europe with the below in mind:

- Uses the framework of ISO 9000 Quality Standards to verify the quality of our systems.
- Ensures that our products and services are of the highest standards.
- Creates continuous improvements to our product and processes through the application of the best quality practices.



## 2.4 Physical Properties – Acceptable Tolerances:

Panel Width:	+/- 2.0mm
Panel Length:	+/- 2.0mm
Thickness:	+/- 10.0%
Surface Flatness:	+/- 0.5%
Side Straightness:	+/- 0.5%
Squareness:	+/- 1.0%

## 2.5 Physical Properties – Product Warranty:

The supplier excludes all warranties in relation to the goods except for those provided in a Warranty Certificate provided to the Customer by the supplier in relation to the Goods. A project-specific full-system warranty may be available if the product is supplied with all recommended system components and fabricated and installed by a licensed installer accredited and approved by the supplier in writing.

## 3.1 Fire Performance – Facade Tiles & Accessories:

ITEMS	COMPLIANCE
Terracotta Porcelain Ceramic Natural Stone	<b>Terracotta, Porcelain, Ceramic &amp; Natural Stone:</b> Deemed-to-satisfy non-combustible in accordance with NCC 2022, Clause C2D10(5)(g)(h)(i)(j) being entirely composed of terracotta, porcelain, ceramic or natural stone materials.
Stainless Steel Clips Steel Sub-frame Aluminium Sub-frame	<b>Steel &amp; Aluminium Accessories:</b> Deemed-to-satisfy non-combustible in accordance with NCC 2022, Clause C2D10(5)(b)(d), being entirely composed of steel including metallic coated steel (ie. zinc-coating) and / or aluminium, including aluminium alloys. NCC 2022 extract below.

(5) The following materials, when entirely composed of itself, are *non-combustible* and may be used wherever a *non-combustible* material is required:

- (b) Steel, including metallic coated steel.
- (d) Aluminium, including aluminium alloy.
- (g) Terracotta.
- (h) Porcelain.
- (i) Ceramic.
- (j) Natural stone.

## 4.1 Environmental Sustainability:

EXERAMIC ceramic facade tiles are eco-sustainable and are a 100% recyclable building material. EXERAMIC ceramic facade tiles are globally Environmental Product Declaration (EPD) certified to enable use in the most environmentally sensitive construction projects.

Heavily focused on the circular economy, the EXERAMIC manufacturing process recovers 100% of the residual material generated during the production process, reintroducing approximately 40% of recycled content into the raw material and recycling 100% of water used.



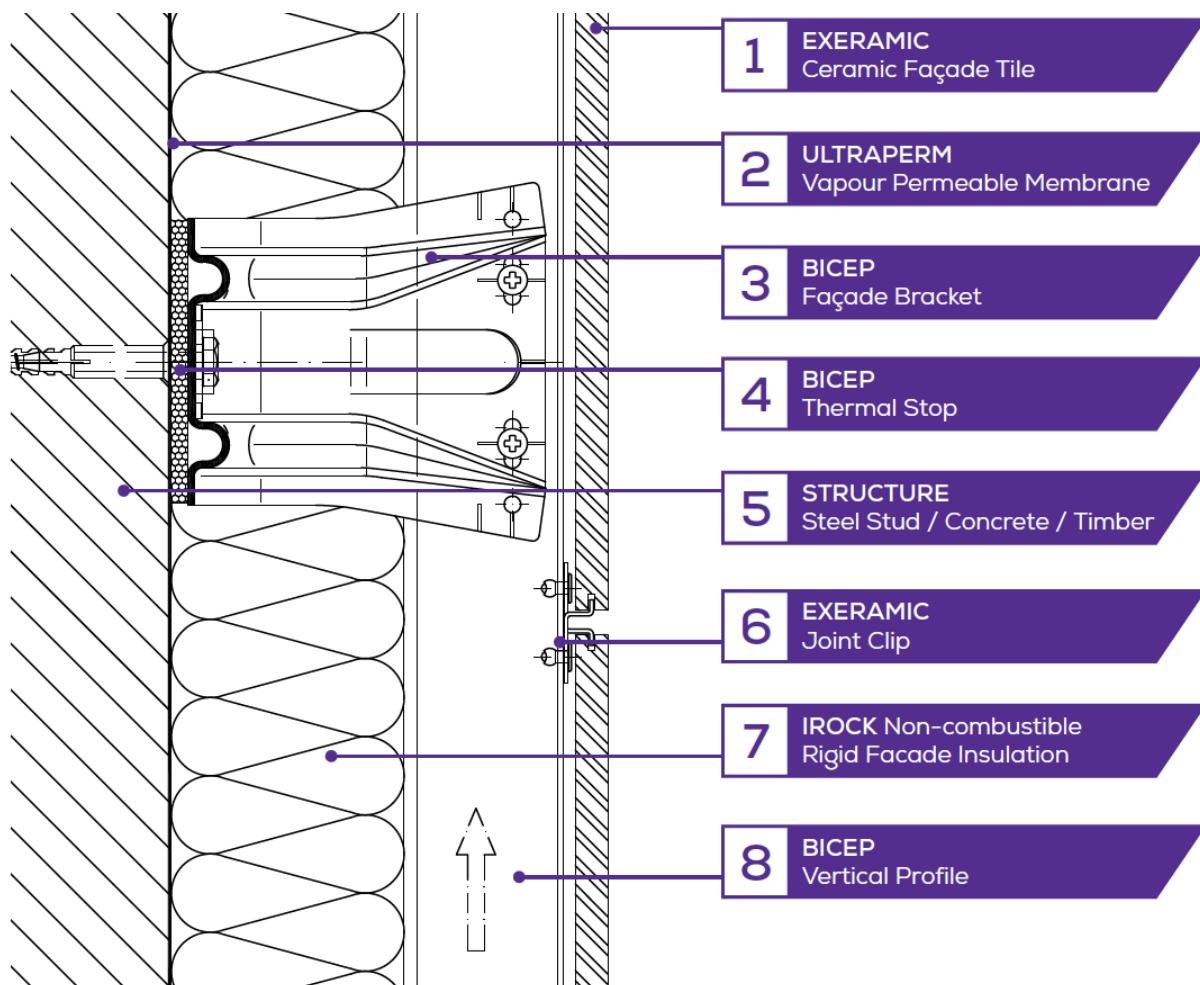
## 5.1 Installation Instructions:

EXERAMIC ceramic façade tiles should be installed in conjunction with the BICEP bracket façade system using proprietary secret fixing clips and associated system components such as IROCK non-combustible external insulation and ULTRAPERM class 4 vapour permeable membrane, all tested and compliant with NCC 2022 and AS standards for; fire performance, thermal performance and weatherproofing, installed as per manufacturer's recommendations and any project specific engineering requirements to comply with relevant NCC 2022 requirements.

## 5.2 Installation Detail:

**Important Note:** This document is not a substitute for project-specific structural engineering. Suitably qualified advice should be obtained for all projects which considers all relevant factors to determine structural loads, spans, fixings, etc, and to ensure suitability and compliance.

The panels shall be fabricated and installed in accordance with the most recent version of the EXERAMIC Installation Details which are available online at [www.bluechipgroup.net.au](http://www.bluechipgroup.net.au) or by emailing [sales@bluechipgroup.net.au](mailto:sales@bluechipgroup.net.au) or by calling **1300 945 123**. (Only PDF installation details are available online. For CAD/DWG installation details email or call as above).



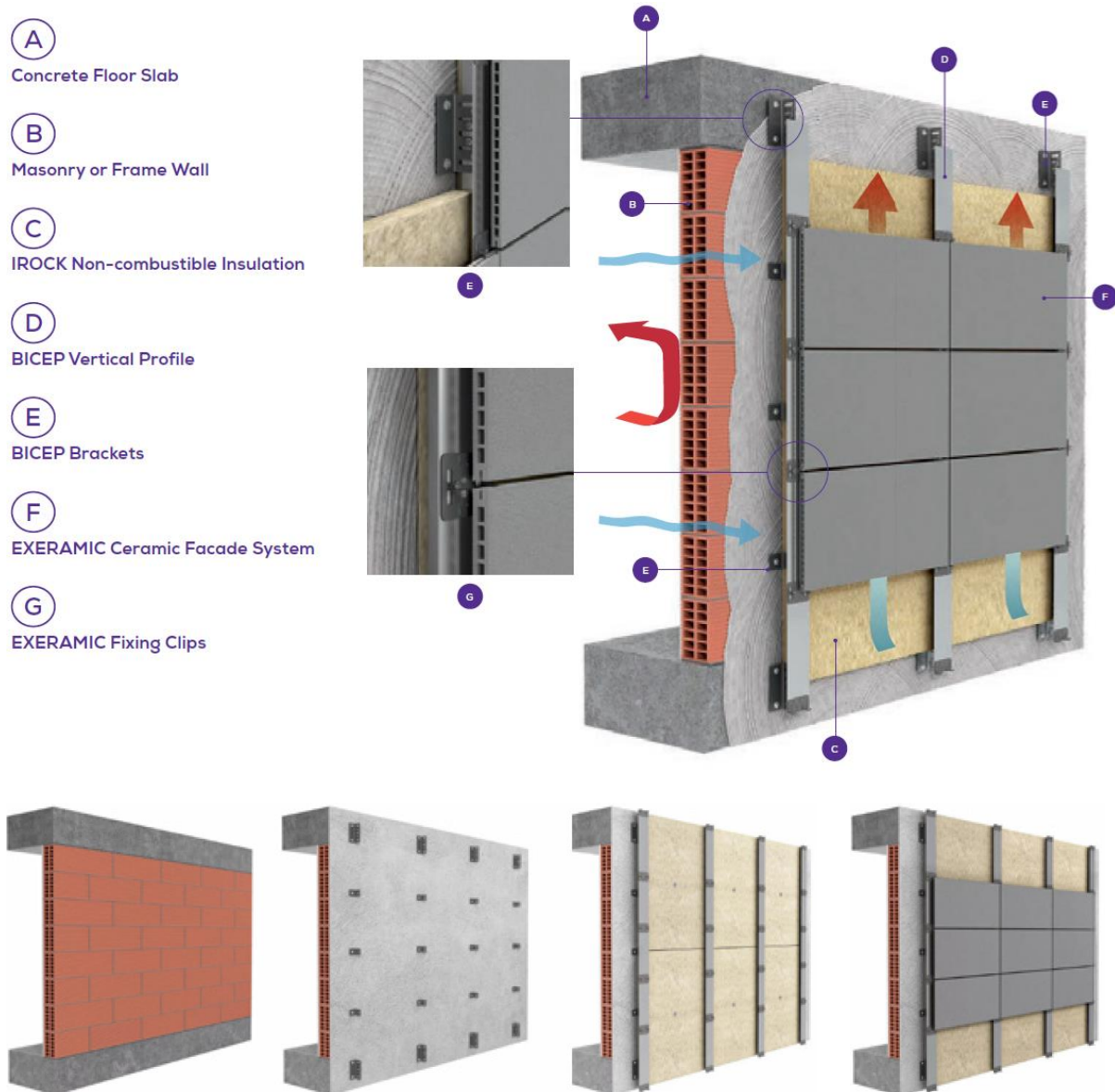




### 5.3 Ventilated Façade Principles:

A ventilated facade is a constructive enclosure solution with a ventilated cavity between the exterior cladding and the backing wall. The ventilated cavity allows the exit and entry of air through its openings (bottom and top) as well as between the panel open joints. The origin of the system comes from the need to protect buildings against snow, rain and moisture, where a double-layer system is proposed.

It consists of two separated enclosure layers forming a cavity that enhances the circulation of air. This air flow removes any type of moisture that may appear and improves the thermal performance of the building by allowing hot air to vent out the top of the ventilation cavity and drawing cooler air in from the bottom.





## 6.1 Acceptable System Components:

### Façade System:

The façade system shall be BICEP façade brackets and support profiles engineered to consider all relevant factors to determine structural loads, spans, fixings, etc, to ensure suitability.



### Exterior Insulation:

The exterior insulation within the BICEP façade system shall be IROCK non-combustible rigid insulation in the chosen thickness (select from the table below), installed on the outside of the primary structure to provide a ventilated, weatherproof, thermal and acoustic insulation zone.

CODE	R-VALUE	DESCRIPTION
IR401260	R1.11	IROCK 40mm Stonewool Insulation, 1200 x 600mm Board
IR601260	R1.67	IROCK 60mm Stonewool Insulation, 1200 x 600mm Board
IR801260	R2.22	IROCK 80mm Stonewool Insulation, 1200 x 600mm Board
IR1001260	R2.78	IROCK 100mm Stonewool Insulation, 1200 x 600mm Board
IR1201260	R3.33	IROCK 120mm Stonewool Insulation, 1200 x 600mm Board



### Sarking:

The sarking shall be ULTRAPERME vapour permeable membrane which is; deemed-to-satisfy 'non-combustible' as per NCC 2022 Clause C2D10(6)(f), is AS 4200.1 compliant and classified as a 'water barrier' as per NCC 2022 Clauses F3D3 and F8D3(1), is classified as 'class 4 vapour permeable' for compliant use in all climate zones 1-8 as per NCC 2022 Clauses F8P1 and F8D3(2), and is installed in accordance with AS 4200.2 for deemed-to-satisfy weatherproofing.



### Fixing Clips:

The EXERAMIC ceramic façade tiles shall be fixed to the BICEP sub-frame using stainless steel secret fixing clips and fixings engineered with all project specific considerations in mind.

