

# PRODUCT INFORMATION



**vitranamel**<sup>®</sup>

VITREOUS ENAMEL PANEL / MANUFACTURED BY FAIRVIEW



**VALCAN**

PART OF THE FAIRVIEW GROUP

[WWW.VALCAN.CO.UK](http://WWW.VALCAN.CO.UK)

# ABOUT



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## PRODUCT DESCRIPTION

Vitranamel is a prefabricated steel cassette panel system featuring a vitreous enamel finish which is applied using a special static powder enamelling process including baking at 800 degrees. This produces a virtually indestructible finish and is one of the most durable exterior coatings in the world; meaning that it is highly resistant to graffiti, abrasion and impact damage.

Vitranamel comprises a steel skin that is prefabricated into a cassette panel and can be manufactured in a wide range of shapes (including curves in certain applications) and finished in a wide range of colours. This enables extremely flexible design possibilities along with the added benefit of low maintenance and excellent durability.

## KEY BENEFITS



### NON-COMBUSTIBLE

Vitranamel is a non-combustible steel cladding system, withstanding temperatures of over 400°C and compliant with C1.12 of the BCA.



### PAINT SYSTEM

Vitranamel uses an enamel coating which exhibits high durability, providing the optimum resistance to weather and industrial automation.



### HIGH DURABILITY

Vitranamel panels are extremely durable. The vitreous enamel coating has excellent scratch, graffiti and impact resistance making it ideal for areas of heavy traffic or extreme wear.



### WEATHERPROOFED

Vitranamel is weatherproofed to BCA clause FP1.4.



### INFRASTRUCTURE

Being non-combustible and virtually indestructible makes Vitranamel one of the most durable cladding products available for infrastructure projects.



### UV STABLE

Vitranamel has a far superior colour consistency over time when compared to typical cladding panels. The colour and gloss level of these panels are unaffected by sunlight.



### VERSATILE

Vitranamel can be custom designed into a wide range of shapes and dimensions as well as able to be perforated or curved in some applications making it a versatile design choice.



### HYGIENIC

Vitranamel has a completely non-porous surface that does not absorb any bacteria. The non-stick surface allows intense cleaning with hospital grade cleaning agents.

## INFRASTRUCTURE

The outstanding toughness and colourfastness of Vitranamel as well as its exceptional sound absorption qualities lends itself to being one of the most durable cladding materials in the market and extremely popular for use on infrastructure projects such as tunnel linings and airports. Other key benefits of using Vitranamel for infrastructure projects:

- Deemed non-combustible.
- Impervious to UV rays and extreme weather conditions – Vitranamel is not affected appearance or performance wise.
- The Vitranamel steel is unusually hard and has a high lubricity: meaning that it is anti-scratch and impact resistant – ideal for high impact pedestrian areas.
- Vitranamel has a high resistance to most acids and alkali's. It is also resistant to sea spray; making it perfect for coastal and marine situations.
- Vitranamel is also graffiti resistant – the impervious nature of the panel enables the complete removal of paint or

## STANDARD COLOURS

						
VN101 WHITE	VN106 STARLIGHT	VN103 PEBBLE GREY	VN410 BIRCH GREY	VN404 PASTEL GREY	VN412 CARBON GREY	VN301 BLACK
						
VN110 WHITE	VN105 PALE IVORY	VN102 CREAM	VN208 SAND	VN202 BEIGE	VN501 BLUSH	VN506 CANDY
						
VN207 WINTER WHITE	VN206 IVORY	VN605 MAIZE	VN204 JASMIN	VN604 SAFFRON	VN606 RED ORANGE	VN710 OLIVE
						
VN401 DOVE GREY	VN402 GLACIER BLUE	VN211 DOVE BLUE	VN709 TURQUOISE	VN713 NIGHT BLUE	VN703 GENTIAN BLUE	

## FIRE RESISTANCE

In today's Architecture, it is the technical details, as well as the appearance that count; such as sustainability, thermal insulation, and fire protection. With Vitranamel you have a product that is deemed non-combustible to the requirements of AS1530.1 and Section C1.12 of the BCA.

Vitranamel is highly resistant to heat and can withstand temperatures of above 500°C for prolonged periods with no damage to the coating and no toxic fumes being emitted when exposed to fire. Vitreous enameled steel will withstand rapid cooling by water spray from +400°C to normal room temperatures over a 30 second period.

The Fire Resistance standards achieved with standard Vitranamel are as follows:

VITRANAMEL		
TEST STANDARD	RESULT	
AS 1530.1	DEEMED NON-COMBUSTIBLE	
AS 1530.3	Fire Propagation	0
	Spread of Flame	0
	Smoke Development	0-1

# TECHNICAL



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## MANUFACTURING QUALITY

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A dedication to the total fulfillment of our client's and customer's expectations is reflected by a complete quality control system, beginning at the point of specification and continuing through to delivery of the guaranteed products. All activities are carried out in a manner which:

- Uses the framework of ISO9000 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 through the application of the best quality practices.

## WARRANTY

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The Vitranamel warranty is issued on a project specific basis and is available up to 25 years. Please contact us for further warranty

## PANEL TYPES

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There are two panel types available for architectural applications:

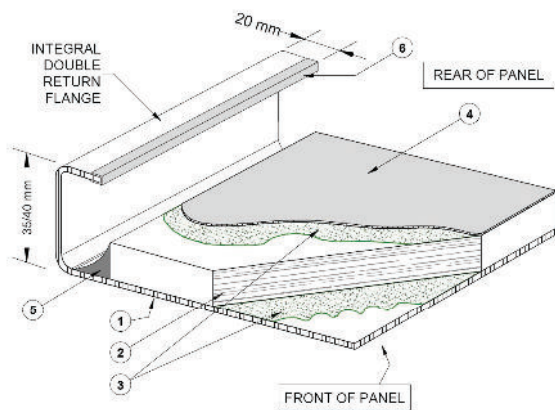
**Heavy Gauge Panels (F-Type or Flanged Panel)** – used to create more complex profiles that include curves, corners and flat elements, heavy gauge panels are pre-fabricated to the required size and shape by cutting and notching steel sheets, bending the returns and flanges and finally welding, finishing and die penetrant testing the corners prior to enameling. Face steel thickness is 1.5mm.

**Light Gauge Panels (C-Type or Composite Panel)** – used principally in lining of vehicular tunnels and curved soffits. Enamel sheets have a flush edge and firing holes are present to provide support points during the enameling process – extrusion edge covers are therefore necessary at the joints and terminal ends. The thickness of the enameling quality steel is 0.7mm.

Leppington Railway Station, NSW

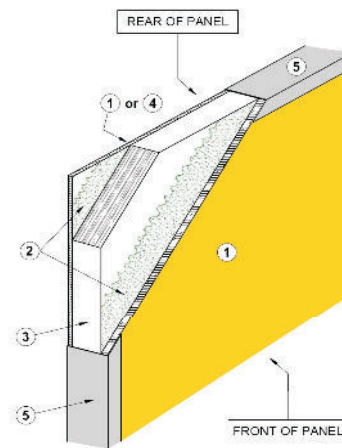
# TYPICAL COMPOSITION - HEAVY GAUGE PANEL

1. Vitreous Enamel Steel Plate (1.5mm EQ Steel)
2. Core
3. Adhesive
4. Balancing Backer
5. Silicone Seal to Perimeter of Core
6. Protective Edge Tape



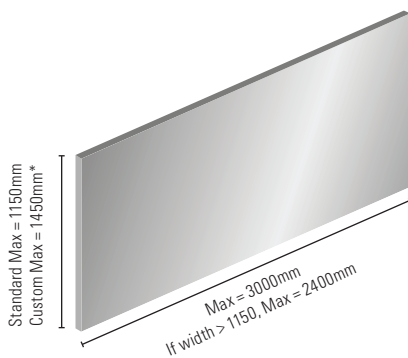
# TYPICAL COMPOSITION - LIGHT GAUGE PANEL

1. Vitreous Enamel Steel Plate (0.7mm EQ Steel)
2. Core
3. Adhesive
4. Balancing Backer
5. Protective Edge Tape

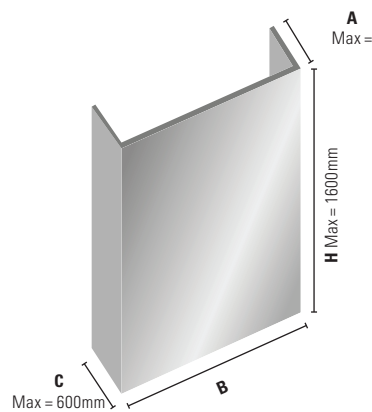


# SHAPES AND SIZES

**Flat Panel**

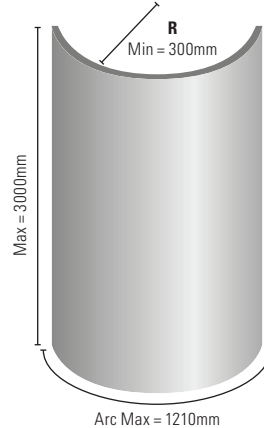


**U-Shaped**

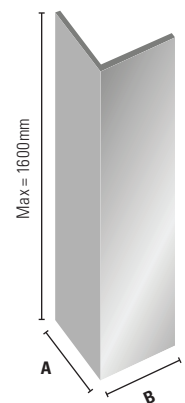


If H > 1150, A+B+C < 1150mm  
If H < 1150, A+B+C < 3000mm

**Curved Shaped**



**L-Shaped**



A or B < 600mm  
A+B < 1150mm

\*Coil is non-stock and may require extra lead time

# SKIN & CORE

Skin - 1.5mm of Decarbonised Steel (HG Panel)

Coating - Vitreous Enamel

Standard Core Material - 10mm Calcium Silicate

## WEIGHT

TYPE	WEIGHT (kg/m <sup>2</sup> )
Heavy Gauge Panel	34kg/m <sup>2</sup>
Light Gauge Panel	26kg/m <sup>2</sup>

Note: Use of honeycomb core reduces weight by 10kg/m<sup>2</sup>.

## TECHNICAL DATA

TEST STANDARD	DESCRIPTION	VITRANAMEL RESULT
ASTM B117-07a	Salt spray test	No visual change
ASTM C538-83: 2009	Colour retention	No colour change
ASTM: C481	Aging of sandwich constructions	No visual change
BS 1344.1	Resistance to thermal shock	No visual flaking or crazing of enamel
BS 1344.2: 1975	Resistance to Citric Acid at room temperature	Class AA
BS 1344.5 : 1984	Resistance to hot detergent solutions e.g. for washing textiles	No visible cracking
BS 14483.1 : 2004	Resistance to chemical corrosion	Class AA (both Sulphuric and Citric Acid)
BS 14483.2 : 2004	Resistance to chemical corrosion by boiling acids, neutral liquid and/or their vapours	No visible cracking
BS EN 10209 : 1996, Annex D	Adherence level of enamel	Class 1
BS EN 14483.4 : 2004	Resistance to hot sodium hydroxide	Rate of mass loss = 1.37g/m <sup>2</sup> /hr
BS EN ISO 15695 : 2001	Scratch resistance	Complies
BS EN ISO 28722 : 2011, Clause 5.3	Resistance to abrasion	Total Mass loss = 0.021g
BS EN ISO 28722 : 2011, Clause 5.4	Impact resistance	No damage
BS EN ISO 8289 : 2011	Low voltage test	0 Defects

# FIXING



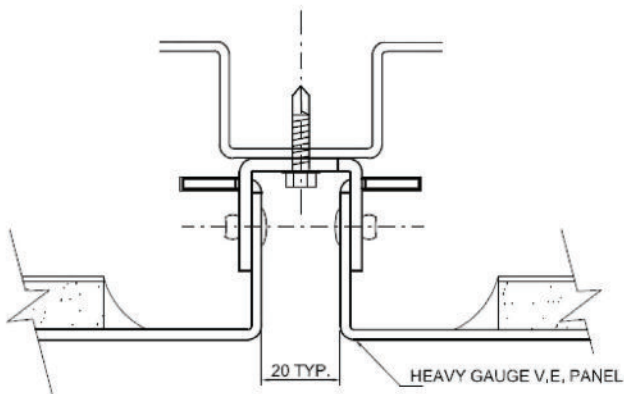
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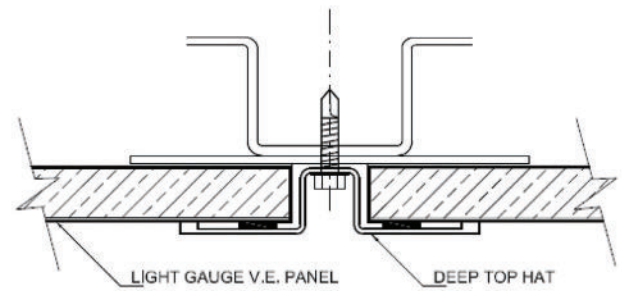
## FIXING SYSTEM

Below are typical details for fixing of the Vitranamel panels:

### HEAVY GAUGE PANEL



### LIGHT GAUGE PANEL



Wanangkura Stadium, WA



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## VALCAN PRODUCT RANGE:



### vitrabond<sup>®</sup>

ALUMINIUM COMPOSITE PANEL / MANUFACTURED BY FAIRVIEW



### vitracore G2<sup>®</sup>

NON-COMBUSTIBLE COMPOSITE PANEL / MANUFACTURED BY FAIRVIEW



### ceramapanel<sup>™</sup>

COMPRESSED FIBRE CEMENT FACADE / MANUFACTURED BY FAIRVIEW



### vitrafix<sup>™</sup>

VITRABOND FIXING ACCESSORIES / MANUFACTURED BY FAIRVIEW



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