Deemed non-combustible bonded aluminium panel.



BONDED ALUMINIUM PANEL / MANUFACTURED BY FAIRVIEW

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## 1.0 SCOPE

SUMMARY: The summary of the work included in this section of the specification comprises the supply and fixing of all VITRACORE G2 deemed non-combustible bonded aluminium panel, including all necessary framing members, fixings and associated trimming, together with all consequential and/or incidental work which may be or may become necessary though not specified or shown in detail.

### 2.0 MATERIALS

#### ALUMINIUM SOFFIT AND WALL CLADDING:

Materials and finishes: All cladding shall be 4.0mm thick Vitracore G2 deemed non-combustible bonded aluminium panel comprising a profiled aluminium core permanently bonded to two skins of 3003 series aluminium alloy. Face skin shall be 0.7mm and rear skin shall be 0.5mm in thickness.

### **3.0 PERFORMANCE**

#### 3.1 GENERAL

- Design wind pressure (Pa): to AS/NZS 1170.2 or AS 4055
- Maximum aluminium frame, subframe or stiffener deflection: 1/150 of the clear span.
- Irregularities: Provide Vitracore G2 cladding panels without irregularities such as oil canning, waves, buckles and other imperfections when viewed at any position but not less than at an angle of 15 degrees to the true plane of the panel, with natural lighting of incident of not less than the same angle.
- Expansion and Contraction: The cladding shall be so fabricated and erected as to provide for all expansion and contraction of the components. Any temperature change due to climatic conditions shall not cause harmful buckling, opening of joints, undue stress on fastening and anchors, noise of any kind or other defects.

#### 3.2 PROPERTIES

#### Skins

- Aluminium face skin: 0.7mm thick
- Aluminium rear skin: 0.5mm thick

#### Mechanical

- Tensile strength 0.8MPa to ASTM C297
- Bond integrity Drum peel > 250 mm N/mm (ASTM D1781)
- Average airborne sound transmission loss and Noise Damping: RW > 19 dB (ISO 140.3)
- Panel weight: = 4.6kg/m2



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#### Finish

The external cladding panel surface shall be factory prefinished by the manufacturer with a Fluoropolymer coating of either PVDF or FEVE or combination of both applied through a "REVERSE ROLLER COATING" process. Total dry-film thickness of the coating shall be 30 microns minimum consisting of a chromate conversion coating, an inhibitive primer and a top coat. The coated surface shall comply strictly with AAMA 2605 Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminium Extrusions and Panels.

The finished surface shall be factory protected with a self-adhesive peel-off foil, tested to withstand at least 45 days exposure to local weather conditions without losing the original peel-off characteristic or causing stains or other damages.

- Application of the Fluoropolymer coating system by means of spray coating after forming and shaping of the cladding elements shallnot be permitted.
- The reverse side of the cladding panel surface facing the wall shall be in a polyester wash coat.
- Colour/Gloss: As per Vitracore G2 standard colour chart with approx. 30% gloss unless otherwise specified.

TEST	DESCRIPTION	RESULT
AS 1530.1	Combustibility test for materials	Non-combustible
AS 1530.3	Simultaneous determination of: Ignitibility, Flame Propagation, Heat Release and Smoke Release	Ignitability Index: O Spread of Flame Index: O Heat Evolved Index: O Smoke Developed Index: O-1

#### 3.3 FIRE TESTING

#### 3.4 WEATHER PROOFING

The system should meet the weatherproofing clause FP1.4 of the NCC for a positive serviceable static wind pressure of up to 600pa for weather resistance.

## **4.0 INSTALLATION**

#### 4.1 FABRICATION

Factory fabricate and assemble all cladding panels in conformance with the manufacturer's Data Sheets under factory supervision and control. Panel alteration: Cut and rout panels using equipment and tools recommended and approved by the panel manufacturer.

Panel reinforcement: If reinforcement of the panel is required, bond an extruded aluminium profile of suitable cross-section and strength to the reverse side of the Vitracore G2 panel using 3M VHB4991. Apply bonding systems in conformance with the manufacturer's specification and recommendations.

Panel marking: Mark each panel on the reverse side for easy identification of size and location.



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#### **4.2 INSTALLATION**

Install panel system as follows:

- Plumb, level, straight and true within acceptable building tolerances.
- Fixed or anchored to the building structure in conformance with the wind action loading recommendations.
- Isolated from any building loads, including loads caused by structural deflection or shortening.
- Allow for thermal movement.

#### 4.3 ACCESSORIES AND TRIM

Requirement: Provide accessories and trim necessary to complete the installation including matching capping and flashings, and install in conformance with the manufacturer's recommendations.

#### 4.4 SUBSTRATES OR FRAMING

Preparation: Before fixing cladding, check and, if necessary, adjust the alignment of substrates or framing.

#### 4.5 SHEET LAYOUT

Colour consistency: Install metallic colour or natural finished panels in the same direction as indicated by the markings on the peel-off foil.

#### 4.6 HORIZONTAL CLADDING SURFACES

Minimum slope: 1:15. Staining: Slope away from visible vertical facade areas wherever possible to prevent staining.

#### 4.7 METAL SEPARATION

Requirement: Prevent direct contact between incompatible metals, by either of the following materials:

- Applying an anti-corrosion, low moisture transmission coating to contact surfaces.
- Inserting a separation layer such as tape.

#### 4.8 CLADDING METHODS

Install and fix the panels using the latest 'VITRACORE G2 CASSETTE FIX INSTALLATION MANUAL V2.1' (refer Fairview Pty. Ltd.) to secure the panels in accordance with the manufacturer's instructions. Panels are to sit flat with even, straight, aligned and smooth joints.

Form corners of panels, with folded underlapped tabs, and seal the apex of the corner internally with a sealant to prevent the ingress of moisture into the panel.

Panels are to be brought on the site fully protected against damage. Joints between the panels are to be caulked with specified sealant.



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### **5.0 COMPLETION**

### **5.1 ON COMPLETION**

ON COMPLETION: Clean down all wall cladding and remove all surplus materials and waste and scrap from the site and swarf that may have lodged on the face of panels.

#### **5.2 PROTECTIVE FILM**

Fully remove protective foil as soon as possible after installation. Do not expose protective foil to UV for more than 45 days. Partial removal of the protective foil is not recommended and should be avoided wherever possible to ensure adhesive transfer to the painted surface does not occur. If any glue remains, contact Fairview for removal advice.

Do not apply PVC-U based tapes or Duct tape to the surface of the protective foil to avoid plasticizer migration affecting the gloss level of the painted surface.

#### **5.3 FINAL INSPECTION**

On completion of the wall cladding work and before any subsequent work, or as may be otherwise arranged, arrange for the work to be inspected by the Architect.

#### **5.4 MAINTENANCE**

Reference: To the Vitracore G2 Warranty and Maintenance Manual.

#### **5.5 WARRANTIES**

Form: Vitracore G2 material only, covering manufacturing defects, delamination and factory applied finish appearance and performance. Period: 15 years from completion of installation.

### END OF DOCUMENT

DOCUMENT: MARCH 2020

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