vitrabond G2®
METAL COMPOSITE MATERIAL

# Machining

## Guidelines

# Product Description

Manufactured by Fairview; Vitrabond G2 is a non-combustible composite material.

Visually, Vitrabond G2 is the same as traditional composite panel; but what makes it different is the technology of the core, which is constructed from a 100% aluminum structure rather than combustible material. While there are some slight variances to machining this product, the lightweight and rigidity make it a preferred product by many operators and installers.

# Machining Vitrabond G2

## GROOVING

Grooving Vitrabond G2 is a simple and easy process - very similar to grooving traditional ACM such as Vitrabond. Traditionally solid core ACM is grooved leaving approximately 0.012" of core material remaining. The special profiled core of Vitrabond G2 is slightly more exacting on the groove depth but does not present any issues.

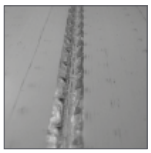
For a CNC Router, the perfect depth is just brushing the rear of the aluminium face skin. The tooling is the same as that for ACP – a 90 degree V-Groover with a 1/8" flat . As depicted in the diagram below, for best results the flat should be adjusted to a slight curve. This is simply done with a linisher or bench grinder. Of course, this tool still works just as well for ACP.

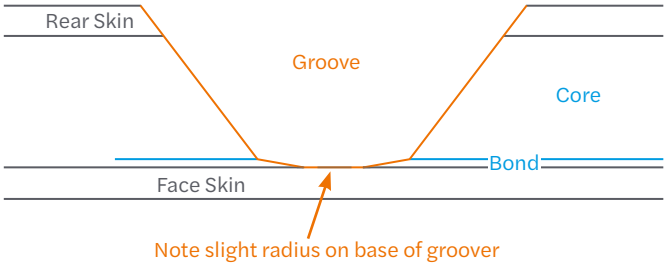
When using a panel saw, the grooving blade should remove all the aluminium of the core and be touching the adhesive layer on the rear of the face skin.

It is important that the tooling be kept sharp as blunt tooling increases heat and pressure on the panel, which in turn can reduce groove quality.

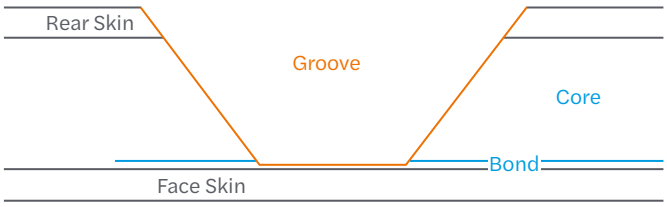
The 0.028" face skin used with Vitrabond G2 is what enables the groove depth to penetrate the rear of the face skin, while still providing the required corner strength and gentle radius on the fold. If there are concerns the groove has gone too deep and cut into the face skin of the panel, a possible solution is to glue an 'L' angle down the rear of the fold; or in a cassette panel glue the zed angle to the rear of the panel.

**CNC GROOVE**






**PANEL SAW**




**Specific details on feeds and speeds:**

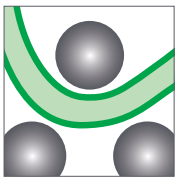
| | TOOLING | FEEDS/SPEEDS | DOCUMENTS |
|---|---|---|---|
| **CNC ROUTER** | Typical 90° ACP V-groover with 1/8" flat. Available from most tooling suppliers. | RPM: 18000<br>Feed: 25-40 ft/min | Keep sharp.<br>Recommended to curve the flat on the groover slightly. |
| **PANEL SAW** | Standard 90° grooving blade. | Speed: 33-50 ft/min | Groove on a flat even surface to ensure depth accuracy. |

## CUTTING

Vitrabond G2 can be cut with identical tooling to that used for Vitrabond and similar ACP's. For the CNC an upspiral cutter is recommended to assist with chip removal. There is no coolant required on the cutter or groover.

**Specific details on feeds and speeds:**

| | TOOLING | FEEDS/SPEEDS | DOCUMENTS |
|---|---|---|---|
| **CNC ROUTER** | 6.35mm Upspiral cutter. 1 or 2 flute. | RPM: 18000<br>Speed: 20-33 ft/min | Clean panel edges if all burrs are not removed. |
| **PANEL SAW** | Use special saw blade for aluminum. | 33-50 ft/min | |



## ROLLING/CURVING

Vitrabond G2 can be curved by means of a roll bending machine. It is recommended to conduct testing prior to actual production.

# Edge Close-out Details

Vitrabond G2 panel edges can be closed out as per below details:


# Protective Film

- Make sure no damage will occur to the panel following removal of protective film
- Remove protective film within 3 months of installation to avoid glue residuals on panel surface due to weathering
- Do not apply PVC tapes, polyurethane sealant or Silicone sealant onto Vitrabond G2 protective film. The plasticiser contained in these materials can penetrate the protective film and cause a gloss change in the coating.
- Do not apply spray paint or permanent marker to the film as the colour may penetrate the film and affect the panel.

# Handling and Storage

- Considerable care should be taken in the handling of Vitrabond G2 as the panels are sensitive to impact, particularly shocks from small, hard objects, which can dent the aluminium cover sheet
- A minimum of two people should be used when moving and stacking large sheets to avoid scratching and surface damage
- Pallets of Vitrabond G2 should be stored horizontally in a cool and dry area where temperature is stable, with adequate support to prevent sagging
- Stacked pallets should be identically sized and not more than three (3) pallets high.

vitrabond G2®
METAL COMPOSITE MATERIAL

It is the responsibility of the Architect, Building Owner, General Contractor, Installer or Fabricator to ensure that the appropriate tests have been carried out on the final assembly and that the materials meet the national, regional and local building codes and regulations. As the supplier, Fairview can only offer test reports for Vitrabond G2 and any tested wall assembly. Fairview is not responsible for determining if a variation in the wall assembly will meet the test standards.

Technical Data contained in this document is accurate at the time of writing 08/21/2021. In the event more information is required please contact the Fairview office on 860-242-2711
or email: helpdesk@fairview-na.com

Issue – 1.0

FAIRVIEW
ARCHITECTURAL