



**MondoClad**

FABRICATION GUIDELINE



This is a general guideline for fabricators and contractors, it is not meant to be a definitive statement as circumstances frequently change and are often project specific. We recommend that you always take into account the current building and safety regulations.

HVG Facades should be advised in writing of any defects detected within 24 hours of the material being delivered.

All material should be handled in a safe manner using the appropriate protective equipment.

## **Handling and Storage**

In order not to damage the MondoClad® sheets please handle them with care by ensuring that they are supported at several points along the length. The sheets should remain on the pallet until just prior to fabrication. The pallet should be stored on a flat surface or suitable racking. Do not slide the coated surfaces against each other.

Each sheet has protective film on the coated surface and is packed face to face to minimise the possibility of damage from the back surface. The protective film used on MondoClad® is to provide temporary protection to the coated surface against dirt, minor scratches, storage, fabrication and the installation process. It is not intended to protect against mechanical damage, corrosion, humidity or chemical damage.

Avoid using tapes, silicone, polyurethane or permanent marks on the film as they may penetrate the film and damage the coating. The protective film must be removed within a 3-month period of fabrication and installation.

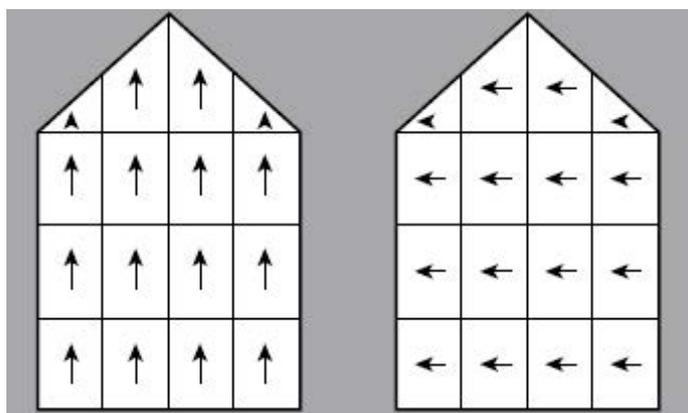


Store the material in a dry temperate environment that is not subject to significant changes in temperature. This is to ensure dimensional changes don't occur just before fabrication.

## Fabrication

It is recommended that all panels are checked for defects before the commencement of machining. Do not fabricate damaged sheets unless the affected section can be removed.

Directive arrows are printed onto the MondoClad® protective film and should be used to maintain the same orientation for all panels. Failure to observe this practice may result in a small difference in appearance of adjacent panels. It is necessary to take this orientation into account when considering panel optimisation.



Ensure installation accessories are compatible with aluminium to avoid the prospect of a galvanic reaction. Direct contact with metals such as copper, brass, bronze, steel or iron should be avoided, and isolation methods should be implemented.

MondoClad® solid aluminium sheets can be fabricated by using techniques and machinery that have been familiar to the facade industry over many years.

It is recommended that the fabrication is conducted in a workshop for the majority of the project, but small quantities of panel production can be conducted on site.

Transitioning from the fabrication of composite materials to solid aluminium will take some trial and error. We strongly recommend that fabricators conduct preliminary trials to determine the speeds, tooling and setting required for their machinery.

## CNC Routing for Cassettes

When CNC routing for the manufacture of cassettes a thickness of 0.8 mm should be maintained at the bottom of the groove. The groove formed should have a flat base of 3mm.



This method for 90° folds may lead to dimensional variations of  $\pm 1.0\text{mm}$  and these should be compensated for in the panel size calculations.

The suggested spindle rotation speed is 18,000 RPM and maximum feed rate is 6.0 metres/minute. These speeds are machine dependent and should be discussed with the CNC router manufacturer. A lubricant mister option is regarded as essential when fabricating MondoClad® panels, the lubricant used must be suitable for routing aluminium. Please consult CNC router manufacturers and tooling companies.

The choice of a carbide tip router tool is suggested, but the choice of cutting tool should be determined after consultation with a tooling professional.

### **Vertical Panel (Wall) Saw Cutting/Grooving for Cassettes**

Good results can also be achieved using a panel saw to cut the grooves for folding. The panel saw must be modified to incorporate a variable speed drive and a misting unit.



### **Folding**

The machining of the V-grooves on the back of the panel allows for the MondoClad® sheets to be hand folded into cassettes. It is generally recommended that the return leg is folded in one movement, closing the fold a few degrees more than the desired angle before making the exact angle.

It is recommended that a portable folding tool be used for small panels and a folding machine/bed for larger format panels. The folding should be performed in a slow continuous movement.

The folding of an edge must be conducted once, as repeated movement may damage the panel.

## Cleaning

There is no specific cleaning regime required for MondoClad® outside of a 1.5km distance from salt water. If MondoClad® is installed within 1.5km of salt water, then an annual wash with fresh water is required.

The surface should be cleaned either manually using a soft brush or by means of a high-pressure cleaner (max. 50 bar) with clean water. If necessary, a mild cleaning agent (pH6-7) may be added, up to a maximum of 10%. Cleaning should take place from top to bottom and should be continuously rinsed with clean water to remove any cleaning agent residue.

Generally, we recommend trying out the cleaning agent on an obtrusive part of the building to check whether the surface appearance is affected. Do not clean surfaces in direct sunlight or if the temperature is above 40°C. The quick drying may cause marks or stains. Do not use highly alkaline products, caustic, strong acid products or highly abrasive cleaning agents.

## Technical Data

Properties	Units	Values
Alloy		5052
Temper		H32
Standard Thickness	mm	3
Painted Weight	kg/m <sup>2</sup>	8.31
Paint Thickness	micron (nom)	30
Raw Density	kg/m <sup>3</sup>	2680
Indicative Minimum Radius	mm	4.5
Tensile Strength	MPa	215-265
0.2% Proof Stress	MPa	>160
Elongation	%	7
Linear Thermal Expansion		2.4mm/m at 100°C temperature diff.
Melting Range	oC	607-650
Modulus of Elasticity - Tension	GPa	69.3 @ 20°C
Modulus of Elasticity - Torsion	GPa	25.9 @ 20°C
Modulus of Elasticity - Compression	GPa	70.7 @ 20°C
Thermal Conductivity	W/m.K	138 @ 25°C
Electrical Resistivity	micro-ohm.m	70.7 @ 20°C
Electrical Conductivity - Equal Volume	MS/m	20 @ 20°C
Electrical Conductivity - Equal Weight	MS/m	67 @ 20°C
Sound Absorption Factor	NCR	0.05
Sound Reflection	%	95

NOTE: All the information provided is generic in nature and is supplied for guidance purposes only.



# MondoClad™



By **HVG** façades

For pricing or further information,  
contact us today.  
[hvghacades.com.au](http://hvghacades.com.au) | 1300 881 712

**SYDNEY**  
29 Henderson Street  
Turrella NSW 2205

**MELBOURNE**  
25 West Park Drive  
Derrimut VIC 3026

**BRISBANE**  
128 Mica Street  
Carole Park QLD 4300

**PERTH**  
72 Bushland Ridge  
Bibra Lake WA 6163

**ADELAIDE**  
57 Barnes Avenue  
Marleston SA 5033