

TECHNICAL BULLETIN

To: Architects, Builders, Regulatory Bodies
The Building Agency Technical Team
The Building Agency Sales Team
The Building Agency Approved Applicators (Cladding)

From: Product Development Manager – Technical

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Topic: AliClad System – Design & Build Points

The AliClad System is a pre-finished extruded aluminium pre-finished weatherboard cladding system. The AliClad system is supplied for use as an external cladding system over a drained and ventilated cavity or as a rain screen.

It is the responsibility of the designer and/or installer to ensure that the AliClad System is appropriate for the intended application.

Before you start your design and build:

- The building must have a risk score of less than or equal to 20 when evaluated against the E2/AS1 risk matrix. Where the risk score exceeds 20, specific design and detailing for structure and weather tightness is required.
- Expansion and contraction of 1mm per lineal metre of the weatherboard is expected with changes in temperature and it should be taken into consideration before installation, especially around joints and junctions.
- Design consideration with regard to the distance location of a window or opening from an internal corner. The Building Agency recommends a minimum of 130mm from the window frame to the internal corner frame to allow for the fixing of the AliClad System and the appropriate flashings.
- Consideration should be given to shrinkage of framing and thermal expansion at horizontal joints, particularly those at mid-floor junctions. Continuous cladding over the mid-floor must be avoided. Where total wall heights exceed 7 metres, the drained cavity must drain at a horizontal joint.
- Walls must include those provisions as required by the New Zealand Building Code (NZBC) E2/AS1 'External Moisture'.
- The system must be installed with a flexible building wrap or rigid underlay that meets the requirements Table 23 of E2/AS1.
- Where the building has a building height greater than 10 m and the upper floors contain sleeping uses or other property, the specification of the external wall must be in accordance with the BS 8414 and BR 135 tested assembly.
- To minimise damage on site, materials should arrive on site as close to installation as possible. The product must be inspected on delivery and any damage noted, photographed, and reported immediately to The Building Agency.
- Store undercover in a dry area. Do not slide boards from packs, lift and set them down carefully to avoid scratches, nicks, and other damage to the boards.

Powder Coating WGANZ Standard:

For in-situ inspection of the surface finish of the powder-coated extrusions for the AliClad System, the below Window & Glass Association New Zealand link will provide an introduction and guidance on the assessment of significant surfaces with respect to surface defects in the coating system.

www.wganz.org.nz/wp-content/uploads/2018/11/Window-Glass-Association-Appearance-in-situ-November-2011.pdf or www.wganz.org.nz/resource-directory

Installation:

The sequence of installation of the AliClad System is critical to allow for the correct installation of components.

- Whether the doors and windows are fitted before or after cladding the components around openings must be installed from the sill up. Installation should be carried out from the bottom to the top of wall faces.
- It is critical that inter-story flashings are fully installed before progressing to the upper levels.
- The installation of the AliClad System is designed using mechanical drainage around windows. The mechanical drainage system consists of using proprietary jamb-to-sill drainage clips for windows using a WANZ Bar Support and for punched or recessed windows.
- Windows and doors may be fitted flush with the cladding or recessed into the opening. The AliClad System Installation Manual gives details for both options i.e., with and without WANZ Bar.
- Where a recessed window option is applied, WANZ bars are not required.
- Where timber or plastic cavity battens are used, fixing must achieve a minimum embedment of 35mm to the structure. Horizontal Timber battens must be castellated, and the top of the batten angled away from the building wrap or RAB. Vertical Battens must be solid. Timber Battens must be H3.1 treated as a minimum.
- A thermal break with an R-value of not less than 0.25 is required where used with lightweight steel framing.

Refer to <https://thebuildingagency.co.nz/all-products/aliclad-aluminium-weatherboards>