

Product Technical Statement



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Product: Innoclad Shiplap Wall Cladding System

Description: Innoclad Shiplap Wall Cladding is manufactured from Innowood, an advanced wood/PVC composite that does not splinter, and is designed for use as an exterior wall cladding. The weatherboards have a shiplap profile and incorporate an interlocking weatherseal in the edgelap between adjacent boards. Innoclad Shiplap Wall Cladding is available in three cover widths: 105mm (WC13625); 165mm (WC20025), and 205mm (WC24025). The profile is formed with stiffening ribs and is nominally 25mm thick.

Components of the system include: J-mould starter, T-bar jointer and one piece corner angle (for internal and external corners). (Alternatively, folded metal flashings by others as shown in the Innoclad Shiplap Cladding System Installation Manual July 2016 may be used).

Scope of Use: This PTS covers the use of Innowood Shiplap Wall Cladding weatherboard profiles WC13625, WC20015 and WC24025 screw fixed directly to timber or steel stud walling members, or to battens forming a drained cavity. It covers the use of Innowood Shiplap Wall Cladding as an exterior wall cladding on buildings within the area and height limits of NZS3604 cl 1.1.2; and the scope of E2/AS1 cl 1.1(a), (b) and (c) in any wind zone up to and including Very High (as classified by NZS3604) where the building has been designed in accordance with NZS3604:2011 "Timber framed buildings" (timber framed), or NASH Standard: Residential and Low Rise Steel Framing Part 1 2010 Design Criteria (steel framed), or where the building is specifically designed to AS/NZS1170 "Structural design actions" up to a maximum design wind pressure differential of 2.5kPa (ULS).

It covers the installation of Innoclad Shiplap Wall Cladding with aluminium window and door joinery complying with the performance requirements of NZS4211:2008 "Specification for performance of windows", and interfaces with sheet panel cladding products.

Innoclad Shiplap Wall Cladding meets the requirements for vertical and horizontal surface spread of fire where the distance to the relevant boundary is greater than 1m, for buildings of any height for all risk groups (except limited to up to 7m for buildings of risk group SI as in C/AS3).

- Conditions:**
- Innoclad shiplap weatherboards must be installed in accordance with the Innoclad Shiplap Cladding System Installation Manual July 2016.
 - *Horizontal fixing* - Innoclad shiplap profiled weatherboards may be direct fixed horizontally where the E2/AS1 risk score is less than 7. Where the Risk Score is 7 or greater [between 13 - 20] Innoclad shiplap profiled weatherboards fixed vertically must be fixed to battens forming a drained cavity.
 - *Vertical fixing* - Innoclad Shiplap profiled weatherboards may be direct fixed vertically where the E2/AS1 risk score is between 0 and 20. Where the Risk Score is greater than 20 Innoclad shiplap profiled weatherboards fixed vertically must be fixed to battens forming a drained cavity.

- The spacing between the centres of fixing battens must be no more than 450mm.
- A thermal break with an insulation resistance of at least R0.2 is required between Innoclad weatherboards and lightweight steel framing.
- Window and door joinery must be installed with vertical jambs and horizontal heads and sills.

Limitations: Folded metal flashings supplied by others must comply with the requirements of acceptable solution E2/AS1 section 4. Typically, 0.55mm BMT grade G550 factory painted AM100 zinc or AZ150 aluminium-zinc coated steel.

Technical Literature: Innoclad Shiplap Cladding System Installation Manual July 2016
 facadelab Report 17-11; May 2017
 CSIRO Fire Testing Report FNKI 11794, 26 September 2016
 Innwood Durability Statement V20160930, September 2016

When used as described above, Innoclad Shiplap Wall Cladding System meets the following relevant performance requirements of the New Zealand Building Code

Relevant Code Clause:	Basis of Compliance:	Related documents:	Comments:
Structure B1.3.1	Alternative solution compared with acceptable	E2/AS1; façadelab report 17-11	The Innoclad Shiplap Wall Cladding weatherboards have properties similar to or in excess of timber weatherboard cladding referenced in E2/AS1. The Innoclad ShiplapWall Cladding System has been tested to and meets the requirements of NZS4284
Structure B1.3.2	Alternative solution compared with acceptable	E2/AS1; façadelab report 17-11	The Innoclad Shiplap Wall Cladding weatherboards have properties similar to or in excess of timber weatherboard cladding referenced in E2/AS1. The Innoclad ShiplapWall Cladding System has been tested to and meets the requirements of NZS4284
Structure B1.3.3a, f, h, j, q	Alternative solution compared with acceptable	E2/AS1; façadelab report 17-11	The Innoclad Shiplap Wall Cladding weatherboards have properties similar to or in excess of timber weatherboard cladding referenced in E2/AS1. The Innoclad ShiplapWall Cladding System has been tested to and meets the requirements of NZS4284
Structure B1.3.4	Alternative solution compared with acceptable	E2/AS1	The Innoclad Shiplap Wall Cladding weatherboards have properties similar to or in excess of timber weatherboard cladding referenced in E2/AS1.
Durability B2.3.1b	Verification method	B2/VM1; Durability Statement V20160930	The wood fibres in Innwood are fully encapsulated by UV stabilised PVC and are protected from exposure to microbes and fungi.
Durability B2.3.2b	Building Code performance		Complies. Innoclad Shiplap Wall Cladding is not difficult to access or repair and does not require the removal of building elements with greater durability.
Fire affecting areas beyond the fire source C3.5	Acceptable Solution	C/AS1-6; CSIRO Report FNKI11794	Innoclad Shiplap Wall Cladding has been tested to ISO 5660. The peak heat release rate is less than 150 kW/m ² , and the total heat released is less than 50 MJ/m ² .
Fire affecting areas beyond the fire source C3.7	Acceptable Solution	C/AS1-6; CSIRO Report FNKI11794	Innoclad Shiplap Wall Cladding has been tested to ISO 5660. The peak heat release rate is less than 150 kW/m ² , and the total heat released is less than 50 MJ/m ² .

External moisture E2.3.2	Alternative solution compared with acceptable	E2/AS1; E2/VM1; façadelab report 17-11	The Innoclad Shiplap Wall Cladding system meets the performance requirements of the Building Code. The profiles have weathertightness features similar to, or exceeding, the features of timber weatherboard profiles cited in the Acceptable Solution E2/AS1. For vertical installation, the Innoclad shiplap wall cladding system ribbed profile provides drainage and ventilation equivalent to corrugated steel in E2/AS1. The Innoclad Shiplap Wall Cladding system, fixed vertically and horizontally, has been tested to E2/VM1 and meets the requirements of the Verification Method.
External moisture E2.3.7	Alternative solution compared with acceptable		Due allowance is provided through the installation instructions: tolerances in cappings and jointers; use over drained cavity to E2/AS1; product can be easily re-dimensioned on site to accommodate variances in substrates; manual provides direction re adequate backing for end laps.
Hazardous building materials F2.3.1	Building Code performance	MSDS	The material from which Innoclad Shiplap Wall Cladding is manufactured does not contain harmful material. MSDS is available.