



H-CLAD Board & Batten

Board & Batten Weatherboard

Technical Guide for Specifiers and Installers

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1 About

1.1 Introduction

HTL Board & Batten is a Cavity-based vertical cladding best suited for light commercial and residential buildings.

This cladding is a first and second line of defence against water penetration by separating the cladding from the external wall frame with an 18mm minimum drained cavity.

1.2 Profiles

The following profiles are covered by this guide:

- HTL120 & HTL121 boards
- HTL123 & HTL124 battens

1.3 Timber Species

HTL Weatherboards are available in the following species:

Siberian Larch (treatment free)

New Zealand Larch (treatment free)

Radiata Pine (treated H3.1)

Radiata Pine (treated H3.2 CCA)

Note - Larch has excellent durability, consequently, neither Siberian nor NZ Larch require treatment.

1.4 Accessories

Products in addition to Board & Batten boards:

Mouldings - (With Cladding)

- Cover battens; HTL901 & HTL902 or HTL903 & HTL904
- Eaves moulding; HTL32 or HTL33

Fixings - (Builder Supply)

- Use Silicon Bronze or Grade 316 Stainless Steel Annular Grooved Crown Head or Rose Head nails. Nail shank diameter must be 2.8mm minimum. Length must allow wall penetration of minimum 30mm.
- Aluminium flashings

1.5 Sales Order Confirmation

Ensure Merchant, Builder or Client signs off HTL Sales Order Confirmation. Important to Check: Profile Code, Face Finish, Selected Lengths, Coat Colour

2 Building Code Compliance

If installed, used and fitted as instructed in this Guide, HTL Board & Batten will comply with these provisions of the New Zealand Building Code:

- Section B1—Structure: Performance B1.3.1, B1.3.2 and B1.3.4 for loads arising from self-weight, wind, impact and creep. (i.e. B1.3.3 (a), (h), (j) and (q)).
- Section B2—Durability: Performance B2.3.1 (b) 15 years and B2.3.2.
- Section E2—External Moisture: Performance E2.3.2.
- Section F2—Hazardous Building Materials: Performance: F2.3.1

HTL Board & Batten product is an Alternative Solution in terms of New Zealand Building Code Compliance.

2.1 Scope

HTL Board & Batten is suitable as a vertical fixed wall cladding meets the requirements and limitations of the following:

- NZBC Acceptable System—E2/AS1, Paragraph 1.1
- Timber framing compliant with NZS 3604:2011
- Risk score of 0-20 calculated from NZBC Acceptable Solution E2/AS1, Table 2; and,
- NZS 3604:2011, Sec 5.2 Wind Zones, including “Very High”
- All materials and processes contained in the NZS 3604:2011 building scope

2.2 Timber Grading

HTL Board & Batten comply with NZS 3602:2003, Table 2:2A.1-*Species* and NZS 3602:2003, Table 2:2A.1-*Grade*. Any loose or bark encased knots or natural timber defects should be removed during installation. All grades may require some docking.

HTL Board & Batten are available in 18.5mm, 21mm and 28mm thicknesses and in a variety of cover widths. A random length supply of weatherboards ranges from 1.8 - 4.8m. Longer lengths may be available on request.

HTL Board & Batten are supplied dry, moisture content at 18% or less (see NZS 3602:2003, Table 2:2A.1-*Moisture*).

HTL Board & Batten is available in a Band Sawn Face (BSF), recommended for better longevity and Dressed Face (DF) (Check with coating manufacturer for sanding requirements.) Other “custom” options available.

2.3 Durability

HTL Board & Batten boards exceed the 15-year minimum durability requirement when fixed

above ground, (NZBC Section B2 – Durability: Performance B2.3.1 (b) 15 years and B2.3.2.).

3 Coating

3.1 Oil coating

Only a deeply penetrating, water repellent, non-filming timber protecting oil/stain is to be used. HTL recommends Dryden WoodOil.

Initial coat is to be applied to all 4 sides, including sealing of all end cuts. Second coat is following installation. Dressed Face boards are to be face sanded prior to oiling.

Installers must refer to the DRYDEN WoodOil Data Sheet at – <https://www.dryden.co.nz/wp-content/uploads/2018/11/WoodOil-Data-Sheet.pdf>

3.2 Paint

Good quality acrylic paints should be used and applied by brush or in accordance with the paint manufacturer's specific instructions. Band sawn profiles should not be coated using a roller.

Total film thickness should be a minimum of 90 microns and dark coloured paints should be avoided and restricted to greater than 40% LRV.

Paint coatings should consist of an acrylic undercoat to all four sides of the board and a minimum of two acrylic top coats to the face side with a film thickness of 30 microns per coat.

Cut edges should be coated prior to installation.

4 Handling & Storage

Ensure HTL Board & Batten boards are kept dry, by storing indoors with a minimum 100mm ground clearance. Avoid damage to the plastic wrapping, to weatherboard edges and surfaces.

5 Installation

Before installing HTL Board & Batten, the wall underlay, flexible sill and jamb tape system must have been installed according to manufacturer's instructions.

The underlay must be installed horizontally and flow continuously around corners. It must be lapped 75mm minimum at horizontal joints and 150 mm minimum over studs at vertical joints.

Ensure underlays and tapes around window and door openings achieve a continuous seal and protect all exposed timber wall framing.

5.1 Health & Safety

HTL Board & Batten board cutting must be carried out in a well-ventilated area. Protective equipment including dust masks and hearing and eye protection must be worn.

5.2 Installation Checklist

- Boards cannot be wet, moisture content of 18% or less (see NZS 3602:2003; Table 2:2A.1-Moisture)
- All faces and edges must be sealed prior to installation. Edges, ends and exposed fresh cut timber during installation must be double-sealed using DRYDEN WoodOil.
- Installation should start at the corner of the wall section being clad, with the first board installed plumb.
- Boards must overhang the bottom plate by 50mm minimum. And ensure minimum ground clearances are adhered to as per E2/AS1:2011 para. 9.1.3.5(a).
- Apply a continuous bead of sealant to the face of internal and external flashings along the fixing line immediately before installing boards.
- Boards must overlap so that the weather grooves meet.
- Pre-drill boards on a slight up-slope with a hole slightly smaller than the nail. Use one nail per board to fix each board to every nog/dwang. Nail shank diameter must be 2.8mm minimum. Length must allow wall penetration of minimum 30mm.
- The fixing is to be in the middle of each Board and Batten, and not less than 35mm from the end of the board. The fixing must finish flush with the surface of the board.
- Boards are to be fixed in full lengths.
- Internal and external corners must be finished according to E2/AS1
 - para. 9.4.5.3(a) External corner (fig 80) and
 - para. 9.4.5.3(b) Internal corner (fig 79).

5.3 Timber Framing

Timber wall framing behind the HTL Board & Batten must meet the requirements of NZS 3602:2003 (Timber and Wood-Based Products for Use in Building).

Timber framing must comply with the requirements and limitations of New Zealand Building Code and NZS 3604:2011. Buildings or parts of buildings outside the scope of NZS 3604:2011 must be to a specific design as laid out in NZS 3603 and AS/NZS 1170. In these cases, framing stiffness must be at least equivalent to the provisions of NZS 3604:2011 and meet framing manufacturer's specifications.

All studs must be at maximum 600mm.

Nogs/dwangs for boards fixed with Grade 316 stainless steel angular grooved Crown & Rose Head Nails in NZS 3604:2011 Wind Zones up to and including Medium, must be at maximum 480mm centres. In High and Very High wind zones, the maximum is 400mm centres.

5.3.1 Framing Tolerances

Framing tolerances must comply with NZS 3604:2011;

- para. 2.4.3-Tolerances and
- Table 2.1-Timber framing tolerances

5.4 Cavity Battens

Available cavity battens include:

- 45mm x 20mm horizontal ventilated cavity batten
- 45mm x 20mm vertical cavity batten
- 45mm x 45mm horizontal ventilated cavity batten
- 65mm x 45mm vertical cavity batten

Horizontal battens to be located at every nog/dwang line, and above & below openings. And vertical battens to be located at opening jambs and all corners. Battens to be fixed with cladding fixings (refer E2/AS1:2011: Table 24).

5.5 Aluminium Joinery

Aluminium joinery (to NZS4211) and relevant flashings must be installed according to the window manufacturer's specifications.

NZBC Acceptable Solution E2/AS1:2011, paragraph 9.1.6, stipulates that a PEF rod and air seal be installed after the joinery has been secured in place. Therefore, a nominal gap of 7.5-10mm must be left between the joinery reveal and the wall framing.

6 Maintenance

The building owner must carry out regular maintenance to prolong the life of the cladding and ensure that New Zealand Building Code requirements continue to be met.

Annual inspections must be carried out and any damaged or deteriorating areas repaired straight away, following manufacturer's instructions.

The surface finish should be cleaned at least annually using a mild detergent and water.

The oil finish will need re-coating every two or three years (possibly more often on exposed walls). Ensure all board surfaces are well-coated, including the bottom edge.

7 Disclaimer

Project specifiers must ensure the product as detailed in this Guide is suitable for its intended use. Any specific design or areas that fall outside the specifications of the Guide will require additional detailing. These must meet all requirements of the New Zealand Building Code. HTL will not be liable for any claims, damages or defects arising from, or in any way attributed to:

- Poor Workmanship
- Poor Design or detailing
- Incorrect design of the structure
- Settlement or structural movement and/or movement of materials to which the products are attached
- Acts of God including, but not limited to: earthquakes, cyclones, floods or other severe weather conditions or unusual climatic conditions.
- Efflorescence performance of coatings applied to the products.
- Normal wear and tear or: growth of mould, mildew, fungi, bacteria, or any organism on the surface of any products (whether on the exposed or unexposed surfaces).

8 Current warnings or bans

This product is not subject to a warning or ban under Section 26 of the Building Act 2004.