



INTERIOR PLYWOOD RANGE

Manufactured in New Zealand by Carter Holt Harvey Woodproducts, the Interiors portfolio is a range of untreated plywood panels suitable for internal use as wall and ceiling linings.

The Interior range of plywood panels consists of natural, untreated panels available in a smooth or textured face with the option of two different grooved profiles, depending on the visual finish.

1.0 PRODUCT INFORMATION

1.1 PRODUCT DESCRIPTIONS AND RANGE

Interior plywood panels are manufactured from radiata pine wood veneers. The veneers are placed at right angles to each other for maximum strength and stability then bonded together with synthetic phenolic (PF) resin to form a strong and permanent Type A bond.

Interior panels are available in a rough (bandsawn) or smooth face appearance with a Textured or Grooved profile. For the Shadowclad interior range, panel sizes are 2440 / 2745 x 1216mm (to provide 1200mm cover). For the Ecoply Grooved Lining range, panel sizes are 2400 / 2700 x 1200. The plywood panels are uncoated and suitable for staining, painting or clear coating.

For plywood used as an exterior cladding, refer to the current Shadowclad Specification & Installation Guide for Cavity Construction which can be downloaded from www.chhwoodproducts.co.nz.

Grooved Profiles

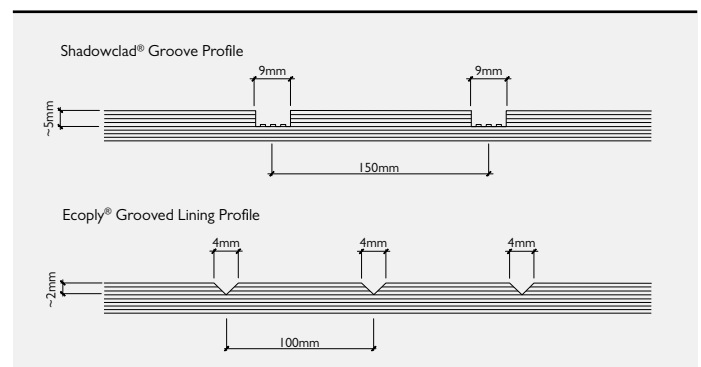


Table 1 Natural Surface finishes

| Face Appearance: Smooth | | Face Appearance: Rough | |
|-------------------------|-----------------------|------------------------|-------------------|
| Ecoply BD ¹ | Ecoply Grooved Lining | Shadowclad Texture | Shadowclad Groove |
| | | | |

¹BD plywood face veneers have been graded to meet the requirements of AS/NZS 2269 Plywood – Structural.

Interior plywood panels are uncoated and untreated, they can be stained, painted or clear-coated for internal use as wall & ceiling linings. **Note:** The groove profiles for Ecoply Grooved Lining and Shadowclad Groove differ in size and spacing, refer Table 2 for specifications.

Table 2 Interior Plywood Product Range

| | Ecoply BD | Ecoply Grooved Lining | Shadowclad Texture | Shadowclad Groove |
|------------------------------------|---------------------------------------|---------------------------------------|--|--|
| Face Appearance | Smooth | Smooth | Bandsawn | Bandsawn |
| Sheet Length | 2400 & 2700mm | 2400 & 2700mm | 2440 & 2745mm | 2440 & 2745mm |
| Width (overall) | 1200mm | 1200mm | 1216mm | 1216mm |
| Width (effective) | 1200mm | 1200mm | 1200mm | 1200mm |
| Cover / Width Tolerance | +/-1mm | +/-1mm | +/-1mm | +/-1mm |
| Nominal Thickness | 12mm | 12mm | 12mm | 12mm |
| Weight (kg/m²) | 6.6 | 6.6 | 6.6 | 6.6 |
| R-value (m².C/W) | 0.104 | 0.104 | 0.104 | 0.104 |
| Groove Profile | N/A | 4mm wide, 2mm deep at 100mm centres | N/A | 9mm wide, 5mm deep at 150mm centres |
| Edge Profile | Square Edge | Tongue & Groove on long edge | Shiplap with weather groove on long edge | Shiplap with weather groove on long edge |
| Treatment Available | Untreated – internal dry applications | Untreated – internal dry applications | Untreated – internal dry applications | Untreated – internal dry applications |

1.2 SUITABLE APPLICATIONS

Interior (untreated and uncoated) plywood is suitable where NZS 3602 - Timber and Wood Based Products for use in Building allows the use of untreated plywood. For information on bracing values for the interior plywood range, please contact CHH Woodproducts on 0800 326 759.

Applications include:

- Interior wall and ceiling linings
- Feature walls and partitions
- Back lining to exposed rafters
- Commercial interiors and shop fitouts
- Furniture and cabinets

Advantages

- Decorative real wood panelling
- Tough and impact resistant
- Strong, providing stiffness and rigidity
- Only requires standard carpentry tools
- Lightweight, easy to work and finish
- Ability to create slight curves
- Water resistant glue bond



1.3 SUSTAINABILITY

CHH Woodproducts plywood is manufactured from radiata pine. It is grown on tree farms which are tended and harvested to provide wood for plywood manufacture. The crop is managed on a sustainable basis to yield millable trees.

New Zealand plantations are managed in compliance with the New Zealand Forest Accord.

CHH Woodproducts plywood range is manufactured in New Zealand at CHH Woodproducts Tokoroa plywood mill.

Available Forestry Stewardship Council (FSC) (SCS-COC-001316) certified upon request.

1.4 PRODUCT IDENTIFICATION

Every sheet of CHH Woodproducts plywood is branded in accordance with AS/NZS 2269 Plywood - Structural. The Shadowclad and Ecoply interior plywood panels are also branded as UNTREATED - FOR INTERNAL USE ONLY.





2.0 DESIGN CONSIDERATIONS

2.1 DESIGN RESPONSIBILITY

Design responsibility lies with the building owner and the professionals that they engage. The specifier for the project must ensure that the details in the specification for their individual projects are appropriate for the intended application. The specifier must also ensure that additional detailing is provided for specific design or any areas that fall outside the scope and specifications of this literature.

Good detailing which avoids moisture or dust accumulation on the sheet surface can help increase durability and aesthetics.

2.2 LITERATURE SCOPE

Untreated plywood must only be used in dry internal spaces for wall and ceiling linings where NZS 3602 allows the use of untreated plywood. For information relating to plywood used as an exterior cladding, refer to the current Shadowclad® Specification and Installation Guide for Cavity Construction. This can be downloaded from www.chhwoodproducts.co.nz.

2.3 DURABILITY

The durability level applicable to plywood manufactured by CHH Woodproducts is dependent upon the application. Detailing and installation methods need careful consideration to satisfy the requirements of the NZBC.

50 year Durability

Untreated plywood used in dry, interior situations will meet the requirements for 50 year minimum durability if coated or uncoated.

2.4 HEALTH & SAFETY

Untreated plywood must be installed and used as per the Material Safety Data Sheet (MSDS) which can be downloaded from www.chhwoodproducts.co.nz.

Always wear safety glasses or non-fogging goggles when cutting plywood panels.

If wood dust exposures are not controlled when machining (sawing, routing, planing, drilling etc) a class P1 or P2 replaceable filter or disposable face piece respirator should be worn. Wear comfortable work gloves to avoid skin irritation and the risk of splinters. Wash hands with mild soap and water after handling panels.

2.5 STORAGE & HANDLING

Interior plywood panels must be:

- Kept dry;
- Stored under cover;
- Handled and stacked with care to avoid damage;
- Stacked flat; clear of the ground, on at least three evenly spaced bearers; and
- Stored in well-ventilated areas away from sources of heat, flames or sparks.
- To minimise dimension movements, allow panel to equilibrate in the final environmental conditions before installation.

2.6 INTERNAL LINING AND SOFFITS

Internal wall linings

- Skirtings, dado mouldings, furniture trim, bookshelves, cornices and other trim can be used to hide mechanical fasteners
- Deep skirting and cornices can be used to extend the effective length of shorter sheets in longer applications
- Unsupported plywood sheets may distort with environmental changes or when coated, particularly if the coating is applied to one side only. Where on going sheet flatness is critical, plywood sheets must be supported by framing

Internal ceiling and soffits

- For internal ceilings use Ecoply Grooved Lining, Ecoply BD or Shadowclad installed with the face down
- For internal/moisture free applications use untreated plywood
- LOSP treated Ecoply is not recommended for interior use

Exterior soffits

- Use H3.1 LOSP treated product
- Allow a 2-3 mm expansion gap between square edge sheets
- Use a good quality paint or stain to protect the plywood from intermittent wetting and wind blown moisture

3.0 INSTALLATION

3.1 PRE INSTALLATION INSPECTION

- Refer to section 2.5 for Storage & Handling information
- Prior to installation, inspect panels for visual defects. Responsibility lies with the installer to ensure individual panels meet the aesthetic requirements of the specific project. CHH Woodproducts will not be responsible for installation or removal costs where aesthetically unacceptable panels have been installed

3.2 SHEET LAYOUT

- Maximum framing centres are shown in table 3 below
- Avoid single spans between framing supports
- For all square edge and shiplaped sheets, products must be supported at sheet edges
- Products with a tongue & groove edge profile do not need support unless specified
- Closer spacings are recommended for high impact areas

Table 3 Maximum Frame Spacings

| | Application | Maximum frame centre (mm) |
|-------------------|---|---------------------------|
| Internal Walls | Fixed vertically, max stud spacing without nogs or dwangs | 600 |
| Internal Walls | Fixed horizontally, maximum stud facing | 600 |
| Internal Ceilings | Face grain across framing, under or over frame | 900 |

Note: Unsupported plywood sheets may distort with environmental changes or when coated, particularly if the coating is applied to one side only. Where on going sheet flatness is critical, plywood sheets must be supported by framing

3.3 FASTENING AND FIXING

Interior plywood can be installed by using a variety of fastening and fixing methods depending on the degree of fastener concealment desired.

General fixing techniques include:

- Nailing (including panel pins), screw and gluing
- Use of scotia / dado & skirting to hide joints and fixings
- Battens and rafters to hide joints
- Creating design features of mechanical fasteners (such as use of rose head fasteners)
- Negative detailing between panel edges

Fixing for internal non bracing walls and ceilings:

Nails: Use 40mm panel pins at 150mm centres at sheet edges and 300mm centres on intermediate supports. Daubs of a polyurethane based adhesive such as Holdfast Gorilla Grip or FixAll 220MS Sealant at 300mm centres is recommended on all framing members.

Where back nailing over rafters use galvanised flat head nails 40 x 2.5mm.

Screws: Use 8g x 40mm screws and adhesive as per nail specifications.

Adhesives Only (not suitable for ceiling applications)

Panels may be fixed with a bead of polyurethane based adhesive on all frame supports. Sheets must be supported by applying pressure during the adhesive curing process in accordance with the adhesive manufacturer specifications or with mechanical fasteners such as nails, panel pins or screws at 300mm centres on all supporting framing.

Holdfast® Adhesive Only Wall System

Holdfast has developed an installation method for Interior plywood when used for internal wall linings (not suitable for use in ceiling, applications).

The system uses a two stage process utilising Holdfast FixAll 220MS Sealant and Gator UHB double sided tape. The Gator tape provides initial fixing support for panels while a permanent bond is established using the FixAll 220MS Sealant.

When installed according to Holdfast technical specifications this system can eliminate the need for mechanical fasteners and/or bracing support during the adhesive curing process.

For specifications and technical support regarding the system contact Holdfast on 0800 70 10 80 or visit www.holdfast.co.nz.

3.4 FORMING CURVES

- Interior plywood panels can be curved for applications such as ceilings and feature walls. Table 5 provides guidance for the minimum recommended radii.
- Shaped top and bottom plates or noggs can be jigsaw cut from 17, 19, 21 or 25 mm thick Ecoply
- Fix covering plywood over the framework
- Attach the out edges with tack nails or clamps first to develop the curve and then fix sheets from the centre out
- For load bearing curves check capability using a structural designer
- Use recommended fastener size as detailed in Table 4 at 150 mm centres on all frames. Longer fasteners, ring shank or annular grooved nails will provide improved resistance to tension. Adhesives alone are not normally recommended in tension applications

Table 4: Fasteners and Characteristic Shear Loads for Ecoply®

| Nominal Thickness (mm) | 12mm | Load ¹ |
|--|-----------------------|-------------------|
| Minimum nail size in timber framing² | 60 x 2.8 mm | 736 |
| Screw size in timber framing² | 8g x 40 mm | 1230 |
| 1.15 mm steel framing³ | 10-24-40 ⁴ | 2000 |
| Screw size in 2.80 mm steel framing³ | 10-16-404 | 1200 |

Table 5: Bending Radii for Ecoply® products

Recommended minimum bending radii for Ecoply products

| Nominal Thickness (mm) | |
|------------------------|-----|
| | 12 |
| Along face (m) | 3.6 |
| Across face (m) | 2.4 |

3.5 FINISHING

Punch nails before finishing and apply a first coat (clear, primer or sealer) before filling punched holes to minimise dryout or staining. High quality paints, stains or clear finishes are recommended for Interior plywood. Tinted clear finishes can provide a full range of architectural options that show the warmth of wood while reducing yellowing and other ultraviolet effects. The use of high gloss finishes and paints tend to highlight naturally occurring and manufacturing characteristics of plywood such as change in grain and beat marks from the sanding. Matt finishes and paints are recommended to provide a natural timber finish.

Interior plywood panels are wood based and respond to changes in humidity. Avoid using inflexible coatings (such as epoxies) that may check on movement of the wood. For ceilings or similar applications it is an advantage to prefinish panels prior to installation. Always refer to the coating manufacturer's specifications for best practice.



4.0 COATING & APPLICATION

4.1 SURFACE PREPARATION

Refer to section 2.5 Storage and Handling. CHH Woodproducts plywood is manufactured and stored in dry conditions at CHH Woodproducts manufacturing facilities. It is the applicator's responsibility to ensure the surface is dry and free from dust and mould prior to coating.

4.2 COATING APPLICATION

Coatings should be applied by brush to ensure adequate coating film build is achieved. Application via roller or spray is not recommended.

4.3 COATING SELECTION

The selection, application and maintenance of coatings is the responsibility of building owners and the professionals that they engage. For advice on specific coating products and their suitability for use on plywood always refer to the coating manufacturer's specifications.

5.0 LIMITATIONS

The information contained in this document is current as at December 2015 and is based on data available to CHH Woodproducts at the time of going to print.

All photographic images are intended to provide a general impression only and should not be relied upon as an accurate example of CHH Woodproducts plywood products installed in accordance with this document or the NZBC compliance documents.

This publication replaces all previous CHH Woodproducts design information and literature relating to plywood suitable for use in interior applications. CHH Woodproducts reserves the right to change the information

contained in this document without prior notice. It is your responsibility to ensure that you have the most up to date information available, including at the time of applying for a building consent. You can call toll free on 0800 326 759 or visit www.chhwoodproducts.co.nz to obtain current information.

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