

STRUCTURAL PLYWOOD INSTALLATION & HANDLING GUIDE

FEBRUARY 2026

Skape's F8 Structural Plywood is manufactured and tested to meet all requirements of the joint Australian/New Zealand Standard AS/NZS 2269 Plywood Structural. This ensures the structural integrity expected for products designed for use in the New Zealand environment. Structural plywood is a uniformly strong, durable, and sustainable building solution, providing essential structural support and bracing for timber-framed buildings.

The following information serves as a general guide for installing F8 Structural Plywood and may be used unless otherwise specified by a suitably qualified professional or engineer.

1.0 GENERAL CONSIDERATIONS

Skape offers a range of interior plywood products suitable for use in both residential and commercial buildings.

1.1 STRUCTURE

F8 Structural plywood is manufactured to AS/NZS2269 and is suitable for use as a structural plywood panel within structural systems as designed and specified by suitably qualified professionals and engineers. This includes its use being suitable for bracing resistance for walls for timber framed buildings under wind and earthquake loads and will contribute to compliance with the New Zealand Building Code (NZBC) in respect of B1 Structure and NZS3604 Timber Framed Buildings..

1.2 DURABILITY

Durability should be detailed and specified by the design professional or engineers to meet the requirements for a timber-based wood veneer product. F8 Structural plywood is manufactured to adhere with the requirements of the NZBC Clause B2 Durability. When the plywood product is specified and used in accordance with good design and building practices, and treated to the required treatment levels as prescribed in NZS3602, it will form part of the Acceptable Solution complying with the requirements of the NZBC (B2/AS1). F8 Structural plywood will continue to contribute to the relevant performance requirements of the New Zealand Building Code for 50 years (or other statutory time frames as specified by the specifier of the project) provided that the specific design parameters of the project are met.

1.0 GENERAL CONSIDERATIONS

1.3 PRESERVATIVE TREATMENT

F8 Structural Plywood is available untreated, or in a range of preservative treatment options depending on the intended application and required durability performance.

H3.1 plywood products are treated in white-spirits (organic) based preservatives containing fungicides and insecticides in accordance with NZS 3640:2003 and is classified as a cladding-class treatment level used for non-structural exterior applications above ground, where the plywood is protected by paint, stain, or other coating systems. Where H3.1-treated plywood is cut, drilled, rebated or otherwise machined, the protective treatment envelope must be reinstated. All exposed end grain and cut faces must be re-treated with an appropriate brush-on remedial preservative compatible with the original treatment type. This requirement is consistent with industry guidance for maintaining durability performance and ensuring compliance with NZBC B2 durability provisions.

The H3.2 plywood products are treated in water based preservative carrier H3.2 CCA (Copper Chrome Arsonate) or H3.2 MCA (Micronized Copper Azole) preservative treatment in accordance with NZS1604.1:2021.

H3 preservative treatment levels as noted in AS/NZS1604 is suitable for "outside, above ground, subject to periodic moderate wetting". Plywood conforming to AS/NZS2269, used in interior dry situations (protected from weather or dampness) does not need to be treated. Where situations for plywood are used for exterior / interior damp situations, plywood shall be H3 preservative treated.

1.4 CUT SHEETS

Where the H3 preservative treated sheets have had its protective envelope broken by such actions as cutting, drilling or machining a suitable remedial treatment to repair the envelope shall be applied to cut surfaces. This may include retreatment of cut ends with a brush-on wood preservative according to the manufacturer's recommendations. Failure to reinstate preservative treatment may affect the serviceable life of the structural plywood and impact on its durability and ability to perform as intended.

1.5 RIGID AIR BARRIER

H3 treated, minimum 7mm F8 Structural plywood can be specified for use as a rigid underlay in accordance with E2 External Moisture Building Code Acceptable Solution (E2/AS1) Section 9.1.7.2 as a plywood substrate used in conjunction with a compatible flexible overlay that meets the requirements of Table 23. The plywood substrate must be direct fixed to framing and appropriately detailed by the designer or specifier of the project.

1.0 GENERAL CONSIDERATIONS

1.6 PLYWOOD CLADDING

When specifying F8 plywood as a plywood cladding solution where the sheet is minimum 12mm thick, manufactured to AS/NZS2269, 5 ply, minimum C face veneer grade, with H3 preservative treatment, the F8 plywood is manufactured to adhere to the requirements of E2/AS1 and will perform as intended when detailed and installed in accordance with E2 acceptable solutions.

With a solid sanded surface with the C face veneer grade, when exposed to its environment, and dependent on the orientation of the sun, the plywood may be prone to surface checking or other aesthetic related issues during its serviceable life.

For these reasons, bbi Wood Products does not support the use of F8 plywood for cladding applications and highly recommends using a structural plywood product that is manufactured at minimum in accordance with AS/NZS2269, that is 5ply, H3 treated, 12mm thick with a band sawn surface finish as a more suitable plywood cladding solution.

The use of a band-sawn surface plywood product and regular maintenance with a coating system applied and maintained by the building owner will reduce the effects of face checking which occurs with the solid sanded or smooth finish CD grade plywood.

1.7 SURFACE CHECKING

Surface checking or face checking are a natural characteristic of an engineered wood-based product when exposed to the elements. Face checking is where there is lengthwise separation of the surface grain which can appear during the cycling of the panel where it gains and loses moisture. This can be exacerbated with coating systems where darker colours are utilised or when plywood is left uncoated where it will naturally "silver" off. Face checking is not a defect and does not affect the structural integrity or durability of the plywood product where it is confined to the face veneer.

1.8 CORE OVERLAP

Core overlaps, or overlays are a characteristic of an engineered wood-based plywood product that can occur during the manufacturing process. Core overlaps may be formed between the cross banded veneers, where the veneers have overlapped when arranged to form an individual ply veneer layer. With the veneer arrangement and lay-up of the plies in the assembly to form the plywood, all the veneers in the layup are then pressed in together to create a plywood panel. Core overlaps (overlays) and pleats are a permissible characteristic as noted in AS/NZS 2269 Plywood Structural standard, provided that the strength or utility of the sheet is not reduced. In general, core overlaps are an aesthetic related issue and will not affect the structural integrity or the durability of the plywood. Where structural plywood is used as an external cladding or substrate, overlaps will not affect the weathertightness of plywood.

2.0 CARE & MAINTENANCE

2.1 STORAGE AND HANDLING

F8 structural plywood products should be handled and stored with care to avoid damage.

The plywood product is recommended to be stored under cover or shelter, in a well-ventilated area that is away from sources of heat, flames or sparks, protected from the weather elements such as the sun, rain, wind or snow, and placed where it will not be exposed to mechanical damage while awaiting installation.

Plywood should be stacked flat, clear of ground and be supported at minimum, on three to four evenly spaced supports as good practice. Failure to support the plywood panels may result in distortion and induce undesirable curves in the plywood panels.

2.2 MAINTENANCE

F8 Structural Plywood will not normally require maintenance. However, there may be some form of maintenance during its serviceable life depending on the specified design, detailed project requirements and the intended use.

Where there are circumstances where other products, coatings, flexible or rigid membranes have been applied, maintenance will be in accordance with the proprietary systems manufacturer's specifications and requirements.

Should the plywood panel be damaged during its serviceable life, it would be recommended to replace the panel to ensure the serviceable life requirements are met, along with long-term appearances, the specified durability and the panel integrity is maintained.

2.0 CARE & MAINTENANCE

2.3 CLADDING MAINTENANCE

All timber-based products used as cladding requires maintenance, including plywood. Careful and regular maintenance by the building owner throughout the plywood's serviceable life will ensure visual aesthetics and durability is maintained.

Maintenance is the responsibility of the building owner, and the professionals that they engage.

At minimum, all plywood cladding should be maintained with the following guidance.

- Plywood cladding should be regularly washed (at least annually) using a soft brush with a mild detergent or solution to remove surface dirt, debris, mould, moss and any residue on the timber surface, including sea spray or other environmental considerations. It is the building owner's responsibility to ensure the cleaning solution is suitable for the use with wood-based products such as plywood, and in following the instructions as provided by the solution or product manufacturer.
- Where a coating or sealing product is used, at the first signs of coating deterioration, recoat in accordance with the coating manufacturer's specifications is advised.
- It is recommended to ensure trees, plants and ground levels are maintained throughout the serviceable life of the product. Longevity of the product is dependent on the regular care and careful maintenance of the plywood.
- Do not use high-pressure water on the plywood panels.

2.0 CARE & MAINTENANCE

2.4 MOULD ON PLYWOOD DISCLAIMER

Moulds and algae can develop on both treated and untreated plywood products. This growth is influenced by environmental factors such as temperature, humidity, moisture, and the presence of airborne mould spores.

Mould growth often appears as unsightly black or green patches, spreading quickly under favourable conditions, such as warm and humid weather. While moulds affect the surface, they do not penetrate the structure of the plywood. However, decay fungi are capable of penetrating and growing within the wood.

Moulds can develop on untreated plywood, as well as on treated plywood such as H3.1 LOSP and H3.2. If the plywood becomes damp, whether in storage or in the field, and environmental conditions are ideal, mould growth may occur. Plywood exposed to the elements can also develop mould in wet and warm conditions.

Prevention and Termination:

To prevent mould growth, it's essential to control the moisture content. Mould growth ceases when the plywood's moisture content falls below approximately 18%. Brush off any visible mould, and similarly, surface algae will disappear when dried.

Recommended Action:

If mould appears on treated plywood, no specific action is needed during the building process. However, it is advisable to cut out bottom plates near doors and windows early and ensure proper drainage for floors exposed to wet weather. Swiftly closing in the structure is also important to prevent prolonged exposure. Should the plywood remain exposed for an extended period due to construction delays, further investigation may be necessary. Depending on local conditions, an extended exposure may necessitate specialist assessments to check for decay fungi.

Remediation Options:

While mould does not affect the structural integrity of plywood, cleaning products such as '30 Seconds Outdoor Cleaner' can restore the appearance of the surface.

3.0 INSTALLATION

Skape provides the following general installation guidance for plywood used in interior environments within residential or commercial buildings.

3.1 INSTALLATION REQUIREMENTS

Untreated plywood sheets must only be installed once the building has been fully enclosed, and the moisture content of the supporting timber framing does not exceed 18% moisture content.

Prior to installation, examine and inspect the panels for any visual aesthetic defects. F8 structural plywood may be subject to minor imperfections and natural characteristics that is associated with engineered veneer-based wood products. Ensure the surface is free from dirt and loose wood fibres.

F8 Structural Plywood can be installed prior to the building being fully enclosed if H3 preservative treated.

Untreated plywood should be protected from weather where possible to prevent mould and weathering of the plywood sheet during the construction installation phase.

3.2 TIMBER WALL FRAMING

When installed to timber buildings, timber framing and sizes must comply with NZS3604 (or specific design in accordance with NZS3603 Timber structures standard or AS/NZS 1170). This includes the selection of timber, being verified kiln dried structural grade radiata pine, minimum stress grade to SG8 with a maximum moisture content of 18%, and treated to the required treatment levels as prescribed in NZS3602 Timber and Wood-based Products for Use in Building.

Nogs or dwangs are not required for F8 Structural Plywood used in bracing applications, unless otherwise required by the specifier of the project or specific design parameters such as proprietary products or cladding systems.

Framing dimensions and heights are determined by NZS3604 stud and top plate tables for load bearing and non-load bearing walls.

3.3 ADJUSTMENTS OF BRACING ELEMENTS

Wall bracing elements longer than those tested shall have their bracing capacity determined by multiplying the tested bracing rating per meter by the length of the element.

Adjustment of bracing capacity of walls of different heights and walls with sloping top plates can be obtained by the methods stipulated in NZS3604 under 8.3.1.4.

Refer to Skape Bracing Installation Guide for more information.

3.0 INSTALLATION

3.4 PLYWOOD SHEET LAYOUT

Sheets must be installed vertically to the timber framing. Structural Plywood sheets are strongest in the vertical orientation or parallel to the grain of the ply panels.

Allow for a 2 – 3mm expansion gap between sheets where there is risk of moisture / dimensional change as good practise.

Please refer to product manufacturers specification for further installation guidance.

Arauco Plywood: [Arauco Plywood](#)
IPL: [IPL Construction Plywood](#)

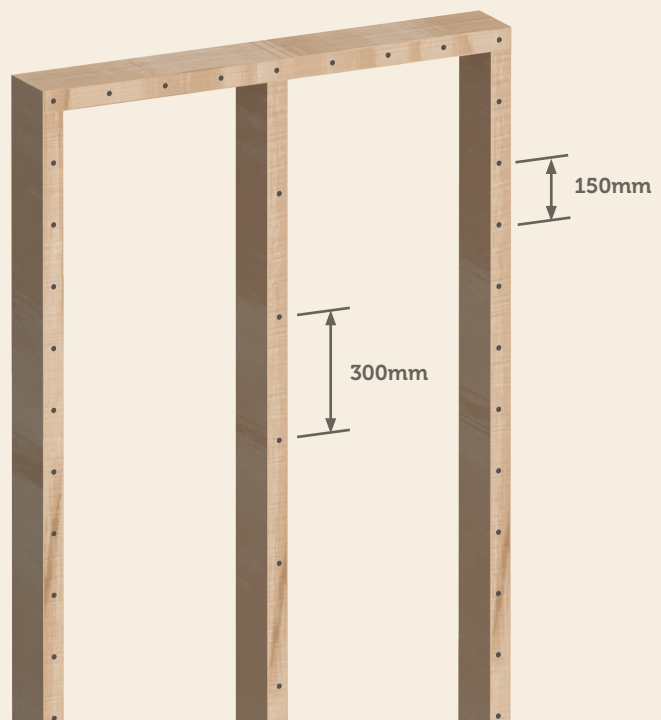
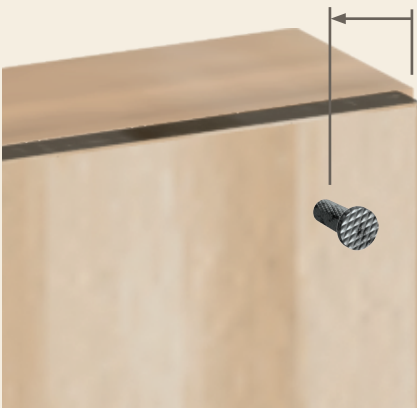
2 - 3mm expansion gap
3 - 5mm if negative detail is required



3.5 STANDARD FASTENING AND FIXING PATTERN

Fasten the edges and ends of the sheet (perimeter) at 150mm centres, and within the panel (body of sheet) at 300mm centres on the intermediate stud/supports.

Mechanical fasteners must be at least 3 fastener diameters or 7mm from the edge of the sheet.



3.0 INSTALLATION

3.6 FINISHING REQUIREMENTS

Edge Sealing:

All plywood panels experience faster moisture penetration through panel ends and edges. As a result, edges and ends should be sealed. Edge sealers help to minimise sudden changes in panel moisture content due to normal climatic changes after installation.

Surface Preparation:

All finishes should be applied as soon as possible after panel installation. Apply finishes during favourable weather conditions and always follow the finish manufacturer's specific application recommendations for plywood products. Use only first-quality finishes and apply according to the application rates recommended by the finish manufacturer. The initial coat should be applied by brush. Sprayed on finishes should be either back brushed or back rolled while wet. Additional coats may be applied conventionally.

Recommended Finishes:

All visible surfaces, including edges must be finished with three coats of polyurethane or a paint system comprising of a primer/sealer, and two topcoats*. If you are using a pre-finished Polyurethane coated plywood you must take extra care when sealing edges to ensure that no coatings are applied to the face of the sheet. This is factory coated and cannot be re-coated.

3.7 FASTENERS

All fasteners used must be corrosion resistant to the appropriate treatment level depending on the intended use, compatibility of materials in contact and the durability time frames as stipulated in NZBC Clause B2 Durability and NZS3604.

At minimum, use full round head (flat head) 50 x 2.8mm hot dip galvanized fasteners or stainless steel (annular grooved) where determined by design or where consideration for specified hazards such as, sea spray zones (Zone D) as defined in NZS3604 for durability.

3.8 FRAME CONNECTIONS

Bottom plates are to be fixed in accordance with the requirements of NZS 3604 or unless specified by specific engineering design.

Use GIB HandiBrac hold down connections at each end of the bracing element in accordance with the manufacturer's specifications and installation guidance.

3.9 PREVENTION OF FIRE OCCURRING

Separation or protection must be provided to Skape® plywood from heat sources such as stoves, heaters, flues and chimneys. Part 7 of NZBC Acceptable Solutions C/AS1 to C/AS6 and NZBC Verification Method C/VM1 provide methods for separation and protection of combustible materials from heat sources.

4.0 REFERENCES

NZS3602:2003 Timber and Wood-based Products for Use in Building

NZS3603:1993 Timber structures standard

NZS3604:2011 Timber-framed buildings

NZS3631:1988 New Zealand Timber Grading Rules

NZS3640:2003 Chemical Preservation of Round and Sawn Timber

AS/NZS1604.1:2021 Preservative-treated wood-based products