

IBS PlyFloor

DESIGN AND INSTALL GUIDE

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NEED IMAGE

1 GENERAL

1.1 PURPOSE OF GUIDE

This guide provides advice on the design, handling, installing and maintaining PlyFloor.

1.2 IMPORTANT DOCUMENTS

This guide must be read in conjunction with the:

- IBS PlyFloor pass™
- IBS PlyFloor warranty.

1.3 SKILLS REQUIRED

To specify PlyFloor the designer shall have the appropriate skills, knowledge of the product and access to all PlyFloor technical information (refer www.ibs.co.nz).

To install PlyFloor, the installer must, at a minimum, be a competent DIYer.

1.4 FOR MORE HELP

Technical assistance is available at info@ibs.co.nz.

While all reasonable efforts have been made to ensure the accuracy of information provided, this is a guide only. It may be subject to change.

1.5 FOR OUR WARRANTY

Refer to www.ibs.co.nz.

1.6 DESCRIPTION

PlyFloor is an F11 structural plywood. The veneers are glued with an exterior phenol-formaldehyde resin. The PlyFloor sheets are CD grade; no open or loose knotholes and only minor face repairs. Sheets are supplied treated to H3.2 (micronized copper azole or CCA).

The sheets have a plastic tongue down one edge and a groove on the opposite edge down the length of the sheet. This enables edge jointing without the need for additional timber support.

Sheet sizes (length x width x depth, mm) are:

- 2400 x 1200 x 21
- 2400 x 1200 x 19
- 2700 x 1200 x 19.

IBS supplies PlyFloor for use as an internal flooring substrate, and as a substrate under roofing or decking waterproof membranes.

1.7 IBS ASSURANCE STATEMENT



For scope, limitations and assurance refer to the IBS PlyFloor pass™.



2 DESIGN

2.1 DESIGN CONSIDERATIONS

Confirm scope

Ensure the project falls within the allowed scope and limitations for the intended use, in particular suitability of the building, treatment requirements and the structural framing support.

Establish substrate suitability

Ensure that the substrate to which the PlyFloor is to be fixed is suitable for the intended building work.

The designer must consider the use of PlyFloor based on the performance characteristics of in-service use, taking into consideration the internal or external location.

PlyFloor Uses

a. Flooring

The floor framing must be designed to NZS 3604: 2011, (section 7) or specifically designed to NZS 3603:1993. Where the substrate is existing, the designer must assure themselves that the substrate is suitable for the intended building work and intended building use.

Account shall be taken in consideration of the floor loads, refer to NZS 3604:2011, (section 1).

PlyFloor can be used as a structural floor diaphragm when specified in accordance with NZS 3604:2011 (section 7).

Deck or roof substrate

Specification must be in accordance with E2/AS1 with all fixings (materials and spacings) in accordance with NZS 3604:2011.



3 PRE-INSTALLATION

3.1 HEALTH & SAFETY

Take all necessary steps to ensure your safety and the safety of others:

- ensure adequate ventilation or mechanical dust extraction when cutting or drilling
- ensure the sheets are well supported when cutting
- wear appropriate safety equipment, clothing and footwear
- use all tools in accordance with the relevant instruction manuals
- clear the work area of any obstructions before work starts
- ensure edge protection and/or appropriate scaffold is installed where working at height.

For further information refer to:

- WorkSafe. (7/2018) *Small Construction Sites, The Absolutely Essential Health and Safety Toolkit*.
- WorkSafe. (12/2016) *Health and Safety at Work, Quick Reference Guide*.

3.2 HANDLING & STORAGE

Take care when transporting, handling, and storing PlyFloor sheets to avoid damaging the sheets.

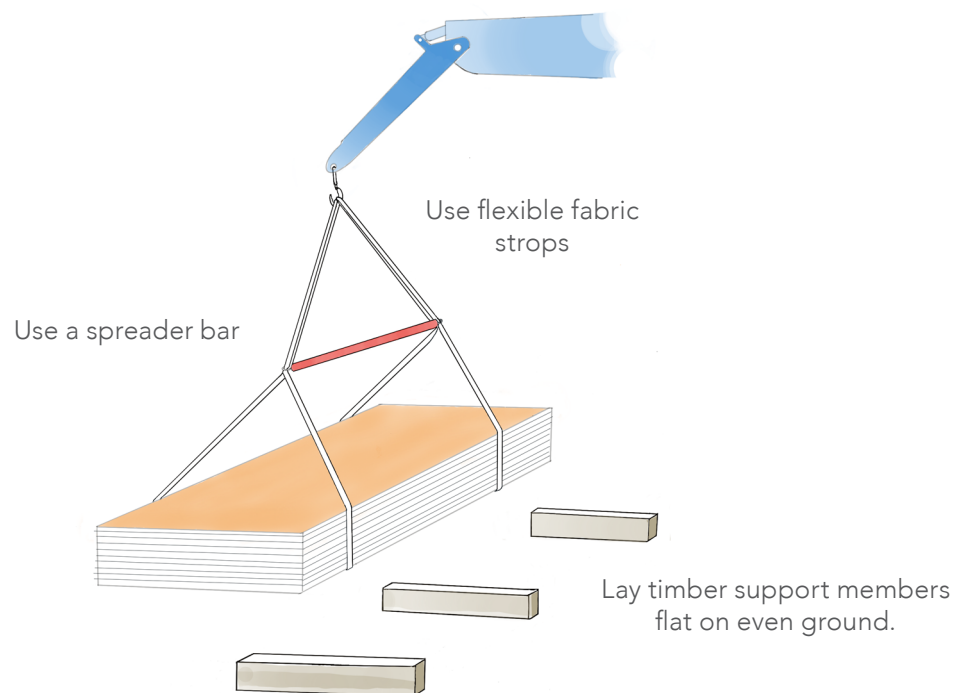
Unload sheets by hand and carry on edge.

If unloading mechanically, ensure there is a minimum of two well-spaced supports, or ensure support with a pallet to avoid excessive bending or sagging. A spreader bar may be needed when using a crane.

If stored on-site, stack sheets flat on a dry surface and at least 150 mm off the ground. Cover the sheets.

Ensure the area where the sheets are stored is dry, well-ventilated, out of direct sunlight and away from any heat source.

FIG 1. HANDLING





4 INSTALLATION

4.1 KEY DOCUMENTS

Refer to the building consent documentation where applicable and the relevant pass™ and this document.

4.2 TOOLS AND OTHER PRODUCTS REQUIRED

Tools

- fine-tooth hand saw or power saw
- jig saw
- plane
- drill
- screw gun when using screws
- pin or nail gun
- sandpaper
- hole saw and speed bits
- moisture meter (where exposed to moist conditions).

Other products

- adhesives (compatible with treatment hazard class H3.2 CCA)
- fixings (in keeping with section 4.2.3)
- fillers.

4.3 CONFIRM SCOPE

Ensure the project falls within the allowed scope and limitations for the intended use in particular, suitability of the building, treatment requirements and the structural framing support.

4.4 CHECK BUILDING AND SUBSTRATES

- Ensure that the timber framing, to which the PlyFloor is to be fixed has an
- 18 % mc or less.
- Where installed as roof and deck substrate, ensure the joists and rafters are spaced correctly, and the specified slope is in accordance with E2/AS1.
- Fixings are required at 150 mm centres around the perimeter and a maximum of 300 mm centres through the body of the sheet.

4.5 SELECT FIXINGS AND FASTENERS

All uses	<p>All fasteners must be a minimum of hot-dipped galvanised, stainless steel or silicon bronze when used in conjunction with H3.2 CCA treated PlyFloor.</p> <p>Material selection in accordance with NZS 3604:20011, section 4.</p> <p>Embedment of fastenings and fixings should not exceed 1 veneer.</p>
Flooring	<p>Joist Fixings to be:</p> <ul style="list-style-type: none"> • 60 x 2.8 mm flat head nails (annular groove for stainless steel) with panel adhesive • 65 x 2.87 mm ring shank mechanical gun nails (set depth to one veneer) • 10 g x 45 mm countersunk, course thread woodscrews (stainless steel for wet areas).
Roof and deck substrate	<p>Rafter and joist fixings to be:</p> <ul style="list-style-type: none"> • 60 x 2.8 mm flat head nails (annular groove for stainless steel) with panel adhesive • 65 x 2.87 mm ring shank mechanical gun nails (set countersink depth to one veneer) • 8 g x 40 mm countersunk, course thread woodscrews (stainless steel).

4.6 CUT SHEETS

Cut sheets using a fine-tooth hand or power skill saw. Arris the edge using a plane or 120-150 grit sandpaper.

4.7 PREDRILL PILOT HOLES

Where sheets are to be fixed with screws, predrill 2.4 mm pilot holes to prevent splitting the sheets. Drill the holes approximately 2-3 mm deeper than the screw depth. Do not overtighten screws as it will reduce their holding strength.



4.8 SPECIFIC USE INSTALLATION REQUIREMENTS

Install roof substrate

Refer to plans and specifications where applicable or install in accordance with E2/AS1.

Ensure the sheets are laid perpendicular to the joists in a staggered pattern, and the sheet ends are supported over timber. Allow 2-3 mm gap between sheet joints for movement. Maximum rafter spacings will depend on the selected thickness of the PlyFloor.

Install deck substrate

Refer to plans and specifications where applicable or install in accordance with E2/AS1.

For membrane decks (or roofs), all fixings to be flush or countersunk with the PlyFloor surface. Remove all sharp sheet edges that could damage the membrane. Membrane installer to ensure the moisture content of the PlyFloor meets the membrane manufacturer's specification prior to installation. The minimum spacing of support timbers shall be no less than 400 mm. Sheet edges must have a minimum chamfer of 5 mm.

Check the surface for joist deflection and adjust or pack where possible to maintain a flat, even surface.

Install flooring

Ensure the sheets are laid perpendicular to the joists in a staggered pattern. Allow 2-3 mm expansion gap between sheet joints allowing for movement.

All sheet ends must be supported, but this is not necessary along the sheet edges provided the plastic tongue is installed.

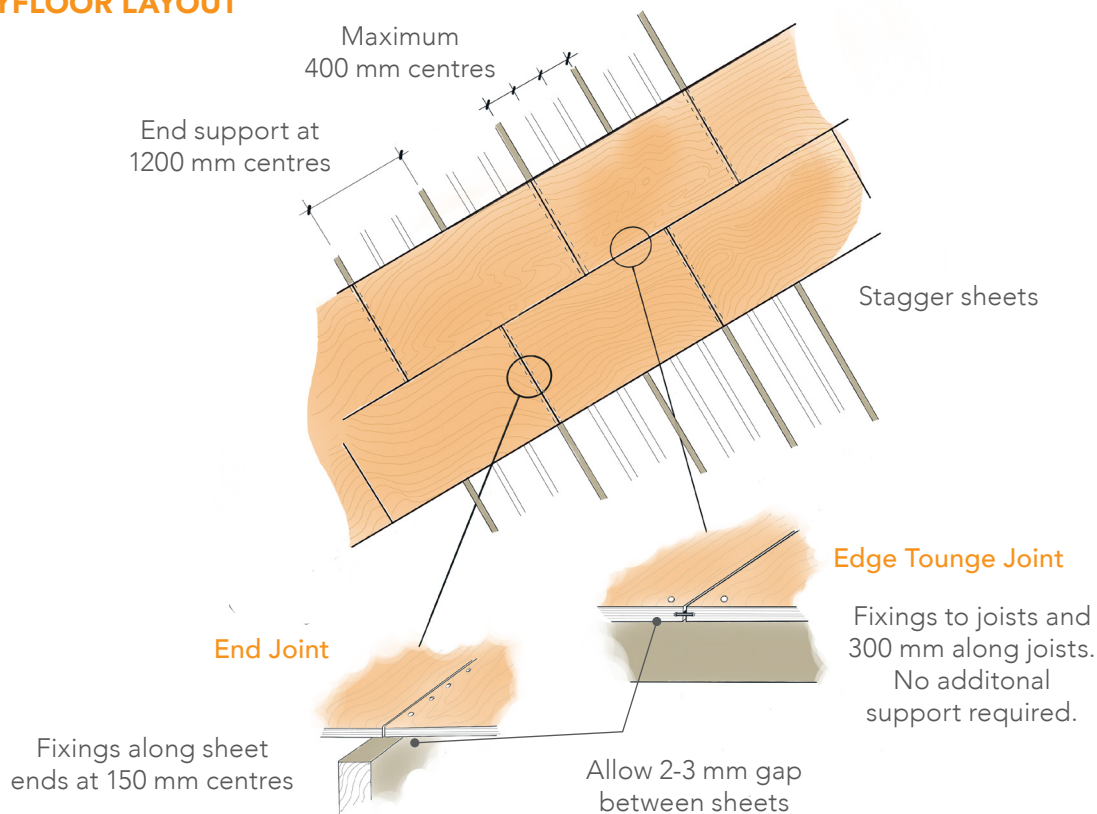
Maximum joist spacings (18 mm thickness and 2 kPa load) 400 mm centres. All other options require specific design.

Fixings are required at 150 mm centres, no less than 7 mm from the sheet edge around the perimeter and a maximum of 300 mm centres through the body of the sheet. This does not apply where the plastic tongue is installed.

Install floor diaphragm

Install in accordance with NZS 3604:2011 (section 7), or as per the specific design documented in the building consent documentation.

FIG 2. PLYFLOOR LAYOUT





4.9 FINISHING

Once installed, fill all visible screw, nail or staple holes with a flexible grade wood filler, and then lightly sand.

Finish the sheets with an impervious coating, membrane or overlay. Where used as a deck substrate and prior to the installation of the waterproof layer, the PlyFloor must be prepared in accordance with the relevant waterproof supplier's requirements and E2/AS1.

Where PlyFloor has been installed and has been allowed to get wet, bubbling may occur. Bubbling

is where the face veneer is separated from the 2nd veneer only. This has no impact on the structural integrity or performance of PlyFloor.

A smooth surface can be created by removing the loosened area with a chisel or a router and filling the indentation with a filler such as a 2 pot epoxy resin or a builders bog. Where the 'bubbled' area is greater than 10% of the board, replacement of the sheet is recommended.

If a high-quality polyurethaned finish is required, ensure the installed floor is fully protected.

5 MAINTENANCE

5.1 BUILDING OWNER MAINTENANCE

PlyFloor is required to be sealed or overlaid with an appropriate protective floor covering (tile, carpet, etc.) or a paint (not water-based) or a compatible membrane system.

Where the sheets are used in areas prone to water splash, a waterproof membrane or impervious floor covering must be used.

Under normal conditions, PlyFloor requires no maintenance, providing that the protective covering has been maintained.

If water damage occurs to an area where PlyFloor has been used, ensure the area is allowed to dry before replacing any covering or coating.



HOME OF SUSTAINABLE BUILDING PRODUCTS

Sustainability covers all facets of business from sourcing, to manufacture and handling of waste with a focus on long term sustainable products for the industry.

IBS selects products from suppliers that are committed, in the long term, to sourcing and manufacturing their products sustainably. We also look for suppliers and manufacturers that have a commitment to fair employment practices.

In NZ, IBS looks to minimise waste, recycle and maximise the use of recyclable packaging.

We offer a range of panel products for use in many different end uses.

Structural Plywood

Decorative Ply

PRIMAaqua

PRIMAalpha Groove

Rigid Rap

Hardboard

Softboard

Formply

Uncertified Plywood

OSB

Wet Wall Linings

PRIMAflex

CUT Panels

Marine Ply

PanelLine Brace



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