

High-density Hardboard

INSTALLATION & MAINTENANCE GUIDE

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CONTENTS

GENERAL & PRODUCT INFORMATION	3
Introduction	3
For more help	3
For our warranty	3
Product description	3
HEALTH AND SAFETY	4
HANDLING, STORAGE, TOOLS & EQUIPMENT	4
Handling	4
Storage	4
Tools and equipment required	4
INSTALLATION	5
Ceiling & Wall	5
Flooring Underlay	7
MAINTENANCE	9

GENERAL & PRODUCT INFORMATION

> Introduction

This guide is intended to assist a competent DIYer or building professional to install IBS high-density hardboard.

Refer to the IBS high-density hardboard pass™ as this defines the scope of use and limitations for the products referred to in this guide.

> Product description

IBS high-density hardboard is an impact and indent resistant, high-density hardboard, manufactured from FSC certified Eucalyptus using wood fibres, heat, water and pressure. It is manufactured to have a Super E0 formaldehyde emission rating and has no added chemicals or resins.

IBS high-density hardboard is available in four variations (standard, pegboard, tempered and flooring underlay), for use as follows:

Product	Description	Use	Size (HxWxD, mm)
Standard	Smooth hardboard manufactured from wood fibres.	<ul style="list-style-type: none"> • Where a flat, paintable surface is required. • As a wall substrate for vinyl and flexible surface finishes. • In general DIY projects. • In applications such as partitioning, internal doors, wall panelling and cupboards, or to improve wall acoustics. • In furniture making. 	<ul style="list-style-type: none"> • 2400 x 1200 x 3.2 (must be installed with a solid backing) • 2400 x 1200 x 4.8 • 2440 x 1220 x 6.4
Pegboard	Standard hardboard with perforated holes and pre-primed.	<ul style="list-style-type: none"> • In general DIY projects. • In workshops or garages to store tools. • In retail displays. 	<ul style="list-style-type: none"> • 2440 x 1220 x 4.8
Tempered	<p>Hardboard tempered by applying a thin film of linseed oil and then baking to improve the rigidity and tensile strength characteristics of the material.</p> <p>This means that the sheets can be used where a higher resistance to moisture is required.</p>	<ul style="list-style-type: none"> • As a wall substrate to accept a waterproof membrane. • For door and partition surfaces. • In a range of non-building and building work-related applications, such as furniture making, in the automotive industry and as pallets or cases for packaging. 	<ul style="list-style-type: none"> • 2440 x 1220 x 4.8
Flooring underlay	Standard hardboard specifically designed to be used over strip timber, particleboard, plywood and concrete floors to provide a flat, uniform, indent resistant base for resilient vinyl floor coverings.	<ul style="list-style-type: none"> • As a flooring underlay where a flat, uniform floor finish is required and the existing flooring substrate is damaged, has surface imperfection or where a water-resistant slip layer is required. 	<ul style="list-style-type: none"> • 1220 x 915 x 5

> For more help

Technical assistance is available at www.ibs.co.nz.

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

> For our warranty

Refer to www.ibs.co.nz.



HEALTH AND SAFETY

Before beginning to install IBS high-density hardboard, make sure that you 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 and nailing
- wear appropriate safety equipment, clothing and footwear
- use all tools in accordance with relevant instruction manuals
- plan and monitor a safe approach for working at height; select and use the right equipment
- clear the work area of any obstruction before work starts.

For further information refer to:

- WorkSafe. [July 2018] Small Construction Sites, the Absolutely Essential Health and Safety Toolkit
- WorkSafe. [December 2016] Health and Safety at Work, Quick Reference Guide.

These documents are available at www.worksafe.govt.nz.

HANDLING, STORAGE, TOOLS & EQUIPMENT

> Handling

Getting the best performance from the product requires care to be taken during loading, unloading and transporting to site. This will prevent pre-installation damage, in particular damage to corners, edges or surfaces.

Ensure foreign objects or debris are removed with a soft broom before storing sheets face to face.

> Storage

The IBS high-density hardboard must be stored in a dry environment, out of direct sunlight, undercover and wrapped with a moisture-resistant cover to prevent long-term exposure to moisture.

Lay IBS high-density hardboard on a flat, dry surface laid flat on bearers spaced at 450 mm centres. Place plastic underneath the bearers if there is a risk of long-term exposure to ground moisture.

> Tools and equipment required

IBS high-density hardboard may be installed using standard carpentry tools and equipment. This includes a fine-tooth handsaw, a skill saw and a jig saw.

Holes can be created using hole saws, cutter bits or twist drills.

High speed routers, spindle moulders and shapers may be used to shape or mould edges.

Ensure all cutting tools are sharp and used in accordance with good trade practice and with the equipment supplier's instructions.



INSTALLATION

Ceiling & Wall

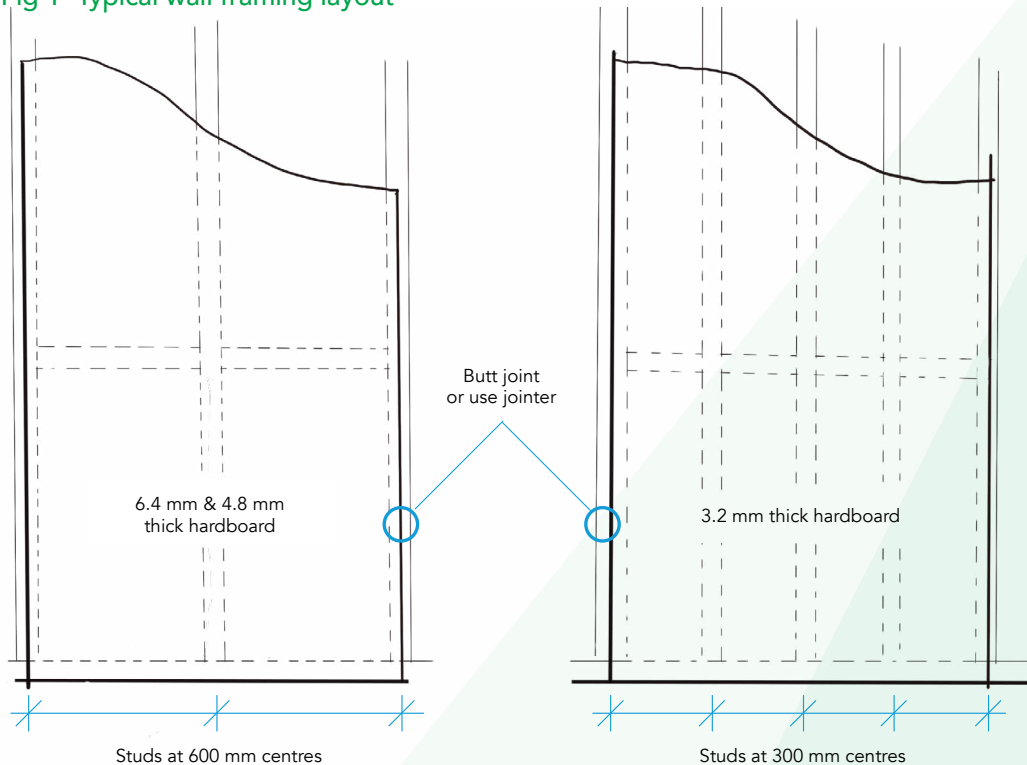
1 Check the substrate

The quality of the installation of IBS high-density hardboard relies on the substrate.

- Check the substrate is straight and true using a level. The framing must be accurately gauged without deviation.
- Check the moisture content of the wall or ceiling substrate is suitably dry. If you have access to a moisture reader, check the framing is between 9 and 14 % moisture content. Alternatively, check to ensure that the substrate looks and feels dry. The inside of your wrist is sensitive to moisture.

- Check that there is adequate framing to ensure support is provided for all sheet edges and fixings.
- For wall framing, the maximum centres for each sheet are 450 mm for 4.8 mm thick sheets and 600 mm for 6.4 mm thick sheets. For ceiling framing, the maximum centres for each sheet are 300 mm for 4.8 mm thick sheets and 450 mm for 6.4 mm thick sheets. 3.2 mm thick sheets must be installed with a solid backing. Add substrate elements if necessary.

Fig 1- Typical wall framing layout



2 Install insulation

Wall or ceiling insulation may be installed if you wish. If installing insulation, ensure that you follow the insulation supplier's instructions.

3 Precondition the boards

IBS high-density hardboard must be moisture conditioned and left for 24 hours prior to installation. This will allow the

hardboard to adapt to the humidity relevant to the application site and allow for any potential expansion or contraction.

To precondition the boards:

- Apply water to the back face of the board with a hose, or for best practice use a garden sprayer to control the correct amount of water. Apply water in the following amounts:

- 3.2 mm thick hardboard – 700 ml per 2400 x 1200 mm sheet
- 4.8 mm thick hardboard – 800 ml per 2400 x 1200 mm sheet
- 6.4 mm thick hardboard – 950 ml per 2400 x 1200 mm sheet

- After the water has been applied, stack the sheets back-to-back when wet to allow to dry. Ensure that you have adequate support under the sheets to avoid sagging.
- Leave the sheets stacked for at least 24 hours prior to installation.

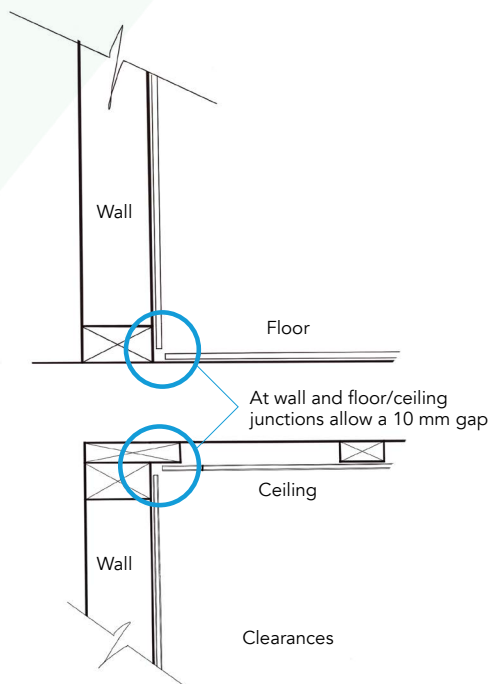
4 Create the sheet layout

Creating the sheet layout is important. It ensures that the sheets will have adequate support for all fixings and edges, helps you to minimise waste and ensures that (when installed) the sheets are placed for best effect.

5 Cut sheets

Cut sheets to fit the layout and any required holes. You can also bevel or chamfer the edges for visible butt jointing of the sheets instead of using jointers.

Fig 2- Typical Sheet fixing



6 Install wall or ceiling lining

Apply first coat

- If the sheet is to be painted or coated, apply the first coat or undercoat with the selected paint system and allow to dry.

Apply multi-purpose contact adhesive

- Apply multi-purpose contact adhesive, in beads of approximately 5 mm in diameter to the substrate at all fixing points, in accordance with the adhesive manufacturer's requirements.

7 Fasten the sheets

Using jointers between sheets

When using jointers start installing sheets from the corner.

- Install a jointer by pressing the jointer along the full length onto the glue, remove the jointer and wait 60 seconds then re-install the jointer.
- Slot IBS high-density hardboard into the jointer. Ensure the smooth side faces outwards. Allow 6 mm clearance at floor and ceiling junctions. Press the sheet onto the glue, pushing on all parts of the sheet. Remove sheet and wait for 60 seconds then reinstall the panel.
- Glue the jointer as above.
- Remove any excess adhesive with a soft cloth using a thinner recommended by the adhesive supplier.
- Fix the installed sheet to the substrate or framing with:
 - 22 mm resin coated staples,
 - 25 mm x 1.6 mm cadmium plated panel pins or
 - 25 x 8 gauge countersinking screws.
- Nails and screws should be spaced every 150 mm around the perimeter 10 mm in from the edge and 300 mm through the sheet.
- Ensure that the fastener is finished 0.4 mm below the sheet surface.
- Install next sheet as above ensuring that there is 1.5 mm between sheets.

Bevelled or chamfered edges

- Place IBS high-density hardboard with the smooth side facing outwards and orientated to be fixed vertically. Allow 6 mm clearance at floor and ceiling junctions, a 3 mm expansion gap at each end of the wall and a 1.5 mm gap between sheets. The correct clearances must be adhered to.
- Press sheet onto glue and push on all parts of the sheet. Pull the sheet off the framing or substrate. Wait for 60 seconds and then push the sheet back onto the framing or substrate.

- Fix the sheet with:
 - 22 mm resin-coated staples,
 - 25 mm x 1.6 mm cadmium-plated panel pins or
 - 25 x 8 gauge countersinking screws and fasten 0.4 mm below the sheet surface.
- Space staples every 75 mm around the perimeter, 10 mm in from the edge and 150 mm through the sheet.
- Nails and screws should be spaced every 150 mm around the perimeter, 10 mm in from the edge and 300 mm through the sheet.

- Predrill all holes with a countersink drill when using screws.
- Ensure that the fastener is finished 0.4 mm below the sheet surface.

8**Finishing**

Ensure the surface is clear. Remove any debris with a soft cloth.

Complete application of the selected coating finish according to the coating supplier's requirements.

Flooring Underlay

For the best outcome use only IBS high-density hardboard – flooring underlay. Sheets should be laid with the smooth finished side facing upwards.

1**Check the floor substrate**

The quality of the installation of IBS high-density hardboard relies on the substrate.

- Check the substrate is straight and true using a level. The flooring or subfloor must be accurately gauged without deviation.
- Check the moisture content of the floor substrate is suitably dry. If you have access to a moisture reader, check the framing is between 9 and 14 % moisture content. Alternatively, visually check to ensure that the substrate looks and feels dry. The inside of your wrist is sensitive to moisture.

2**Precondition the sheets**

IBS high-density hardboard should be preconditioned to allow the sheet to adapt to the humidity environment of the application site. This ensures that the sheet will remain stable and will not shrink or expand at the time of installation.

- Remove IBS high-density hardboard from any packaging.
- Lay over substrate and leave for at least 24 hours.

3**Create the sheet layout**

Creating the sheets layout is important. It ensures that the sheets will have adequate support for all fixings and edges, helps you to minimise waste and ensures that (when installed) the sheets are placed for best effect.

Using a brick pattern, start on long edges of the underlay at 90 degrees or at right angles to the longitudinal direction of the subfloor. Lay the sheets leaving 3 mm expansion gap around the perimeter walls and fixtures and 0.4 mm between sheets.

4**Cut sheets**

Cut sheets to fit the layout.

5**Install flooring underlay****Fasten the sheets**

Fixing sheets depends on the substrate.

Fix the sheets as follows:

To fix to a plywood or particleboard substrate

- Apply a flexible flooring adhesive to the sheet in accordance with the adhesive manufacturer's requirements.
- Lay the sheets allowing expansion of 0.4 mm between sheets and 3 mm around the perimeter.
- Place sheet and staple sheet with
 - 22 mm resin-coated staples or
 - staples that are 3 mm longer than the thickness of the existing subfloor or
 - nail sheets with 25 mm x 2.5 mm head ring grooved buttress type underlay nails.
- Space staples every 75 mm around the perimeter, 10 mm in from the edge and 150 mm through the sheet.

To fix to a solid timber substrate or strip flooring

- Apply a flexible flooring adhesive to the sheet in accordance with the adhesive manufacturer's requirements.

- Lay the sheets allowing expansion of 0.4 mm between sheets and 3 mm around the perimeter. Lay sheets at 90 degrees to the strip flooring.
- Place sheet and staple with:
 - 22 mm resin-coated staples or
 - staples that are 3 mm longer than the thickness of the existing subfloor or
 - nail sheets with 25 mm x 2.5 mm head ring grooved buttress type underlay nails.
- Space staples every 75 mm around the perimeter, 10 mm in from the edge and 150 mm through the sheet.
- Fixings should be fastened 0.4 mm below the sheet surface.
- Space nails every 75 mm around the perimeter, 10 mm in from the edge and 150 mm through the sheet.
- Do not nail into subfloor joints.

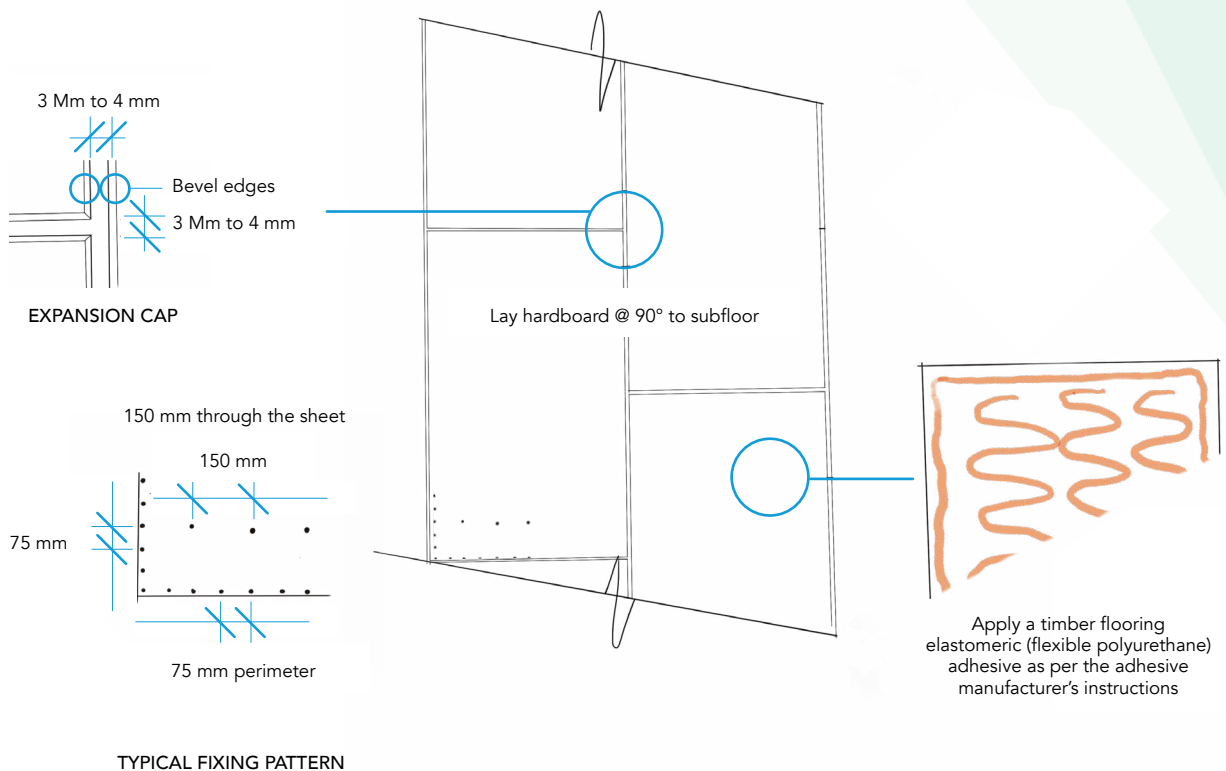
To fix to a concrete substrate

- Prepare the substrate in accordance with the premium grade flexible polyurethane adhesive manufacturer's recommendations and ensure the concrete is dry.
- Apply adhesive to underlay using a V2 trowel and in accordance with the adhesive manufacturer's requirements.
- Lay the sheets onto adhesive allowing expansion of 0.4 mm between sheets and 3 mm around the perimeter.
- Roll with a 40 kg roller weight.

6 Finishing

- Use a flat based sanding machine (Polivac or similar) or sanding block. Carefully sand underlay joints to a level plane and any fixing points to remove fibre built up. The level of sanding required will vary depending on the selected floor covering.
- Sweep or vacuum the floor so that all dust and loose fibre is removed.
- Apply selected floor covering material.

Fig 3 – Flooring underlay sheet layout





MAINTENANCE

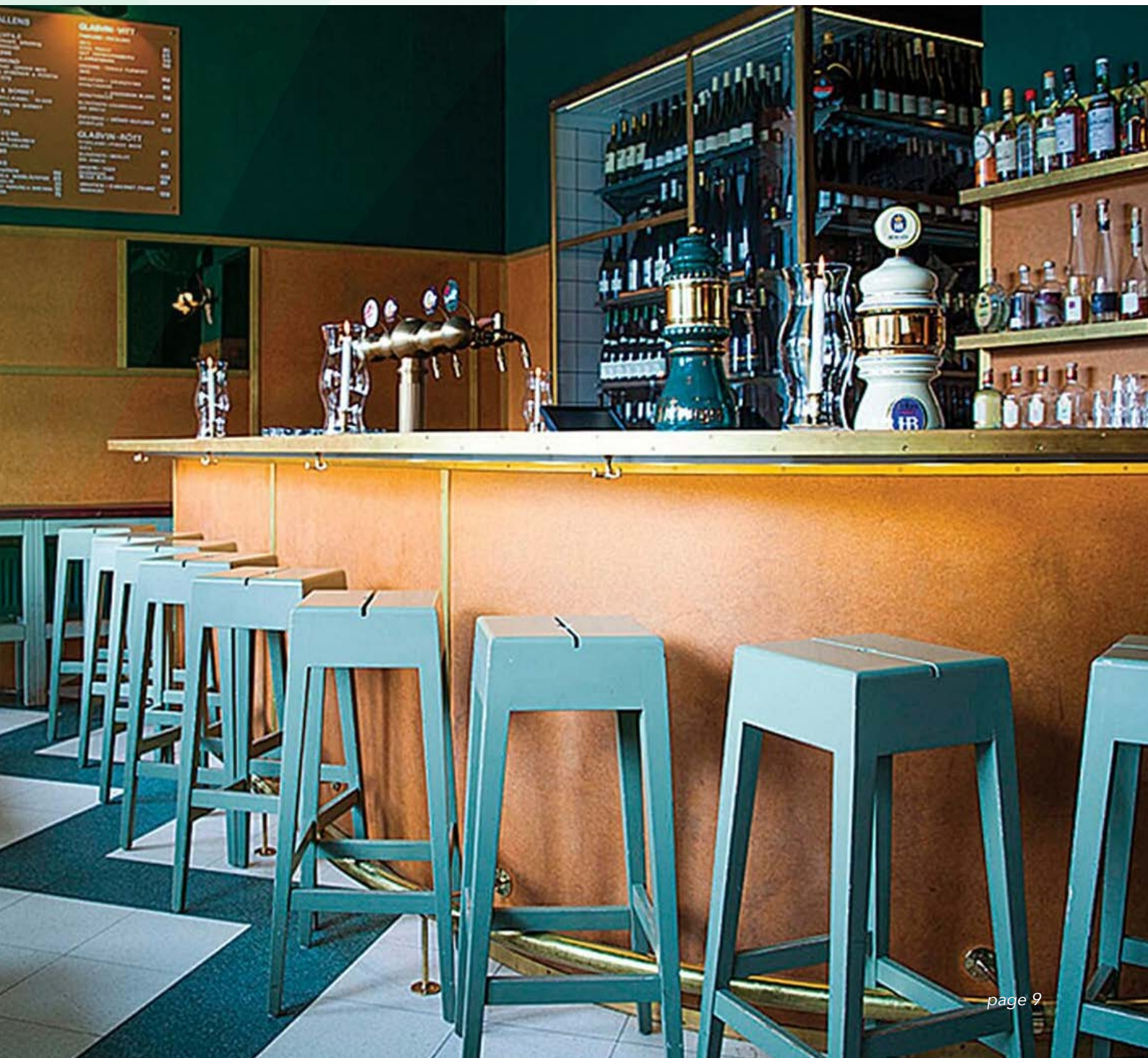
IBS high-density hardboard shouldn't require specific maintenance, provided it is not exposed to undue amounts of water once installed.

Regularly inspect the sheets to ensure that there is no evidence of swelling at the sheet edges, which would occur if the sheets had been exposed to moisture. If this has happened, the sheets will need to be replaced.

Any holes can be repaired by patching or filling with a suitable interior grade filler.

If the sheets have been coated, then recoat in accordance with the supplier's recommendations.

In the case of IBS high-density hardboard – flooring underlay, check to ensure that the floor covering is intact and protecting the underlay from becoming wet. If necessary, replace the floor covering.





HOME OF SUSTAINABLE BUILDING PRODUCTS

Sustainability covers all facets of business from sourcing, to manufacture, handling of waste and with a focus for 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 New Zealand, 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

OSB (Orientated Strand Board)

RigidRAP

EUROFloor

RigidRAP-XT

EUROLine

Plywood

Structural Plywood

Decorative Plywood

Formply

Builders Grade Ply

Marine Ply

Plyfloor

Fibre Cement Board

PRIMAaqua

PRIMAflex

PRIMAalpha Groove

PRIMAactu

Hardboard

Softboard

PanelLine Brace

Showerline

Mini-Panels