IBS Hardboard

Hardboard Standard
Hardboard Tempered
Hardboard Pegboard

Design & Installation Guide

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IBS
SUSTAINABLE BUILDING PRODUCTS

Welcome to Independent Building Supplies (IBS), your trusted partner in the New Zealand building industry. Since our inception in 1993, IBS has been dedicated to sourcing and providing the highest quality building materials from around the globe. As a family business with four generations active in the building industry in New Zealand, we bring a wealth of experience and a deep commitment to excellence.

One of the key aspects that set IBS apart is our commitment to innovation. We are constantly on the lookout for new and improved building materials that can enhance the efficiency and effectiveness of construction projects. Our team of experts works closely with suppliers to bring cutting-edge products to the New Zealand market, ensuring that our customers have access to the latest advancements in building technology.

But our commitment to excellence doesn't stop at our products. At IBS, we pride ourselves on providing unparalleled customer service. Our knowledgeable and friendly team is always on hand to offer expert advice and support, helping you choose the right materials for your project.

ABOUT IBS

At IBS, we recognise that the foundation of any great building project lies in the quality of the materials used. That's why we meticulously select our suppliers, ensuring that every product meets our stringent standards for durability, performance, and sustainability. Our extensive range of offerings includes everything from plywood and panels to flooring and cladding, all tailored to meet the diverse needs of the New Zealand market.

OUR PRODUCT RANGE

We seek to develop the most innovative, professional and profitable experience for our clients. Our passion is for providing our customers with the best products, the best service, and the best experience

In addition to our exceptional product range and customer service, IBS is also dedicated to sustainability. We recognise the importance of protecting our environment and are committed to sourcing eco-friendly building materials. Our sustainable product offerings help reduce the environmental impact of construction projects, allowing our customers to build responsibly without compromising on quality or performance.

IBS is more than just a supplier of building materials; we are a partner in your success. Our comprehensive range of services includes everything from product sourcing and logistics to technical support and training. We work closely with our customers to understand their unique needs and provide tailored solutions that help them achieve their objectives.

Join the countless builders, contractors, and homeowners who trust IBS for their building material needs. Discover the difference that quality, innovation, and exceptional service can make in your next project. Choose Independent Building Supplies – your partner in building excellence for over 30 years.

- **IBS RigidRAP®**
- **IBS RigidRAP®- XT**
- **IBS EUROFloor**
- **IBS EUROLine**
- **IBS FIBRE® Range**
- **IBS Structural Ply**
- **IBS Builders Grade® Ply**
- **IBS Formply**
- **IBS Decorative Ply**
- **IBS PanelLine®**
- **IBS Showerline**
- **IBS Softboard**
- **IBS Hardboard**
- **IBS Peg Board**
- **IBS Acoustic Panels**
- **IBS Mini Panels**

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NZBN 9429000097253

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1. Introduction

1.1 Introduction

Built to Last, Designed for New Zealand

IBS Hardboard is a multipurpose, high-density fibre board known for its smooth finish and durability. Ideal for wall linings, automotive interiors, door facings, cabinetry backing, and a wide range of general-purpose applications, it offers exceptional versatility for both homeowners and builders.

Designed to meet a variety of construction and finishing needs, IBS Hardboard provides a reliable, high-quality solution where strength and performance matter. This guide is intended to assist a competent DIYer or building professional to install IBS High-Density Hardboard.

1.2 Scope

Scope of Use

IBS Hardboard is designed for dry, interior applications such as:

Typical Uses:

- Wall and ceiling linings
- Door and partition facings
- Furniture backs, shelves, drawer bottoms, and divan bases
- Display boards and signage
- Automotive trims, visors, and boot linings
- Packaging for food, crates, pallets, and product protection

1.3 What is IBS hardboard?

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).

1.4 Sizes & Applications

	TABLE 1 | IBS Hardboard Technical Specifications			
Product	**Length (mm)**	**Width (mm)**	**Thickness (mm)**	**Weight per m2 of sheet (kg/m2)**
IBS Hardboard **Standard**	2400	1200	3.2	9.3
	2400	1200	4.8	14.0
	2400	1200	6.4	19.2
IBS Hardboard **Tempered**	2400	1200	4.8	14.4
IBS Hardboard **Underlay**	1200	915	5	5.6
IBS Hardboard **Pegboard**	2400 (White)	1200	4.8	14.4
	2400 (Black)	1200	4.8	13.4

1.5 Benefits

- **Super E0 Formaldehyde Emissions:**Low emissions for a healthier indoor environment
- **Highly Impact Resistant:** Built tough to withstand heavy use
- **Smooth Surface:** Ideal for painting, laminating, or finishing
- **Cost-Effective:** Affordable without compromising quality
- **Versatile Applications:** Perfect for walls, cabinetry, automotive use, and more
- **Ease of Use:** Perfect for walls, cabinetry, automotive use, and more
- **Sustainable Choice:** Eco-friendly and responsibly sourced

1.6 Intended Use

Intended use for IBS High-Density Hardboard are:

- As a wall substrate for vinyl and flexible surface finishes
- Multi-use product
- Partitioning, internal doors
- Partitioning wall paneling and cupboards, or to improve wall acoustics

1.7 Supporting Info & Documents

This document must be read in conjunction with the:

- IBS Product Specification for IBS Hardboard
- IBS Maintenance and Warranty for IBS Hardboard

CAD details and all other information including any updates are available at www.ibs.co.nz.

2. Best Practice

2.1 Health & Safety

When cutting and handling IBS Hardboard sheets, you must always wear safety gloves, eye protection, and a dust mask. Use well-ventilated areas and appropriate cutting tools. Secure sheets to prevent movement. Dispose of offcuts and packaging responsibly. Complete the installation checklist and take clear photos of the finished work for documentation.

Safety First:

Cut smart. Breathe safe.

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.

Safe Work Practices:

- **Never dry sweep.** Always use an M-Class or higher vacuum or dampen dust before cleanup.
- **Never use grinders.**
- **Always cut in a well-ventilated area** using a dust-reducing circular saw with a compliant blade and vacuum extraction.
- **Wear a properly fitted P1 (or higher) respirator** as per AS/NZS 1716 and follow guidance from AS/NZS 1715:2009.
- **Warn others nearby** before cutting and rotate personnel to limit exposure.

Important: Intact IBS Hardboard sheets pose no health risk. The hazard arises only when dust is generated during mechanical processing.

For further information on Health & Safety, refer to:

- The Absolutely Essential Health and Safety Toolkit
- Worksafe New Zealand Quick Guide.

2.2 Handling & Storage

Loading and Unloading

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.

Transport to Site

Always drive the delivery vehicle as close as possible to the location where the panels are to be installed. When transporting the panels, it is essential to firmly secure the pallets to prevent the panels from sliding or moving while in transit.

Storage

- Store hardboard panels in dry, well-ventilated conditions, following the recommendations in this guide.
- Always stack sheets flat on evenly spaced gluts (bearers) that run the full width of the sheet.
- When stacking multiple layers, align gluts vertically for even support.
- Handle sheets with care to protect the decorative face.
- Lift sheets rather than dragging them to avoid surface damage.
- Keep the protective film on until the panels are ready for use.

Precondition panels:

Fillet stack panels and leave for at least 48 hours in the room where they will be installed.

Site considerations:

- Selection of the right equipment for working from a height
- Safe working with ladders and stepladders
- Maintain a clear unobstructed work area

Important Disclaimer

IBS is not responsible for damage caused by improper storage or handling of IBS Hardboard.

To maintain product integrity and ensure optimal performance, always follow the recommended storage and handling guidelines outlined in the official installation guide.

Failure to comply may result in product damage and void warranty coverage.

2.3 Cutting/ Drilling

The method of cutting depends on the volume of cutting required. Panels can be cut using stationary table saws, circular saws, or jigsaws. Cutting should be performed in a dry environment, and dust control measures must be in place.

It is recommended that fibre cement saw blades (see figure 1,2) are used to cut the panels on site. These blades have been designed especially for fibre cement and when correctly employed, a high level of finish can be achieved. The blade is uniquely designed with vibration damping composite body construction and diamond tipped teeth shaped to give a tear-free edge.

When small amounts of cutting are required on site, an alternative to the recommended fibre cement saw blade is a carbide-tipped flat trapezoidal tooth blade. This has limited life and will need regular changing.

Figure 1
Fibre cement blade.

Figure 2
Fibre cement blade.

Also use the following method to cut IBS Hardboard:

- Knife
- Hand lever guillotine
- Fiber cement shear

Dust reducing circular saw equipped with a Blade Saw Blade and connected to a M Class or higher vacuum. Holes can be created using hole saws, cutter bits or twist drills.

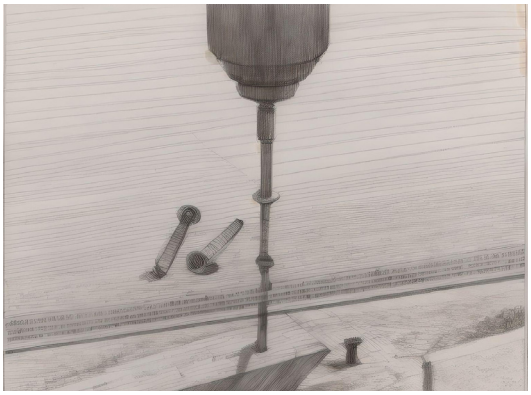
High speed routers, spindle moulders and shapers may be used to shape or mould edges.

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

During Cutting:

- Ensure good ventilation in the area.
- Position the cutting station to direct dust away from yourself and others.
- Rotate employees on cutting tasks during the shift.
- Use a Blade Saw Blade (or equivalent) with a dust-reducing circular saw connected to an M Class or higher vacuum.
- When sawing, sanding, rebating, drilling, or machining: Wear a P1 respirator or higher, fitted according to manufacturer instructions.
- Keep people at least 2 meters away from the cutting station.
- If not clean-shaven, use a powered air respirator with a loose-fitting head top.
- Wear safety glasses and hearing protection.
- Ensure others nearby follow the same safety measures.
- Clean up carefully; never dry sweep. Use water, wet wipes, or an M Class or higher vacuum.

2.4 Penetration



For smooth, clean cut circular holes:

- Mark the centre of the hole on board.
- Pre-drill a hole to be used as a guide.
- Cut hole to the required diameter using a hole saw fitted to a electric drill where the central bit is inserted into the pre-drilled hole.

For small irregular holes:

- Small rectangular apertures can be achieved by forming a series of small holes around the perimeter of the opening.
- Tap out with a chisel and clean up with sand paper or a rasp.

3. Durability

3.1 Compliance

NZ Building Code Compliance

IBS Hardboard is designed to meet the rigorous standards of the New Zealand Building Code (NZBC). All installations must follow the guidelines outlined in the official IBS Hardboard Design & Installation Guide to ensure compliance with NZBC Acceptable Solutions, including E3/AS1.

3.2 Responsibility

Designers and/or contractors responsible for the intended project should follow the details and recommendations specified in this manual.

It is also wise to keep in mind that all designs and constructions should comply with appropriate and relevant requirements of current legal building codes, regulations and standards, both domestic and international.

*The information provided in this installation guideline is valid at the time of publication.

3.3 Conditions

General

- 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.

3.4 Defects

Before Installation, please ensure you check the panels for defects or damage.

3.5 Differing Installation

To ensure the warranty on the product remains valid, it is crucial to follow the design and installation guidelines provided. Failure to adhere to these instructions may result in the warranty being voided.

- Inspect the IBS Hardboard for any damage before installation; replace any damaged sheets.
- Walls shall include those provisions as required by the NZBC Acceptable Solution ‘E2/AS1’ ‘External Moisture’. In addition all wall openings, penetrations, junctions, connections, window sills, heads and jambs must incorporate appropriate flashings for waterproofing. The other materials, components and installation methods used to manage moisture in external walls, must comply with the requirements of relevant standards and the NZBC.
- For timber frame walls longer than 12m, it is best practice to allow for construction joints to accommodate movements generated due to timber shrinkage or defections.

3.6 Prohibited Uses

- **Uncovered outdoor cladding** – Not designed for long-term weather exposure; moisture and UV can cause damage.
- **Structural load-bearing** – Lacks the strength for framing, bracing, or other weight-supporting roles.
- **High-moisture environments** – Avoid bathrooms, laundries, or flood-prone areas without proper protection.
- **Direct soil or concrete contact** – Can absorb moisture; always use a moisture barrier or gap.
- **Unsupported heavy loads** – Not suitable for shelving or decking unless fully supported.
- **High-heat or flame zones** – Combustible and not rated for fire resistance.

4. Design

4.1 Check the Substrate

- The framing must fully support all sheet edges. It must be rigid and not rely on the cladding sheet for stability. All timber framing sizes must be as specified in this installation guide.
- They must also comply with the NZBC or be suitable for the intended building work.
- Timber framing must be in accordance with framing manufacturer's specification.
- Lightweight steel framing must be in accordance with Nash Design and NZS 3404 Steel Structures Standard.

4.2 Framing

Ensure framing is straight and provides full support to all sheet edges. Include nogs or trimmers where needed. Space framing to suit standard 1220 mm wide sheets.

4.3 Tolerances

Make sure the frame is square and start from a central datum line. The frames should be straight and level to ensure a flush surface for the sheeting.

4.4 Batten Requirements

Batten Requirements

Timber or steel battens are required when installing over:

- Concrete, masonry block, or brick walls or Polystyrene or similar substrates
- Ensure concrete or block walls are fully dried and sealed before battening.
- Battens must be plumb and provide a flat, even surface for sheet installation.

4.5 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:

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

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 2440 x 1220 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.

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.

4.6 Standard Hardboard Design Considerations

For best results, Standard Hardboard should be moisture conditioned, especially when:

- Using sheets larger than 1830 x 1220 mm
- Sheets require rigid fixing
- Precise fabrication tolerances are needed
- Condition by spraying water on the back and brushing it in with a stiff broom. Stack sheets flat, back-to-back, for at least 24 hours before installation.

Approximate litres of water per 10m² of board	
Thickness	**Litres**
3.2mm	2.3
4.8mm	2.7

4.7 Tempered Hardboard Design Considerations

Tempered Hardboard should be conditioned by wetting the back with water for at least 48 hours. Use a fine spray and brush to apply water, then stack sheets flat, back-to-back during conditioning.

Approximate litres of water per 10m² of board	
Thickness	**Litres**
4.5mm	2.7
6.4mm	3.2

4.8 Use in Moisture-Prone Areas

- 4.5 mm and 6.4 mm Tempered Hardboard is suitable for internal lining in bathrooms and laundries.
- Seal sheet edges and perimeters (approx. 100 mm wide) with primer.
- Coat with a quality paint recommended by your supplier.
- Use caulking in aluminium or PVC mouldings around edges.
- Do not use in shower recesses unless fully sealed on all sides.

4.9 Damp Buildings

Do not install Tempered Hardboard on walls with permanent or intermittent dampness. Correct moisture issues and allow walls to dry before installation.

IBS Hardboard Scope

Product	Description	Use	L x W x Thickness (mm)
Standard	Smooth hardboard manufactured from wood fibres.	• 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.	• 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 preprimed.	• In general DIY projects. • In workshops or garages to store tools. • In retail displays.	• 2440 x 1220 x 4.8
Tempered	Hardboard tempered by applying a thin film of linseed oil and then baking to improve the rigidity and tensile strength characteristics of the material. This means that the sheets can be used where a higher resistance to moisture is required.	• 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.	• 2440 x 1220 x 4.8
Flooring underlay	Standard hardboard specifically designed to be used over strip timber, OSB EUROFloor particleboard, plywood and concrete floors to provide a flat, uniform, indent resistant base for resilient vinyl floor coverings.	• 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 waterresistant slip layer is required.	• 1220 x 915 x 5

5. Installation

Below is the recommended process for IBS Hardboard, please make sure you follow the below steps in order.

5.1 Substrate Requirements

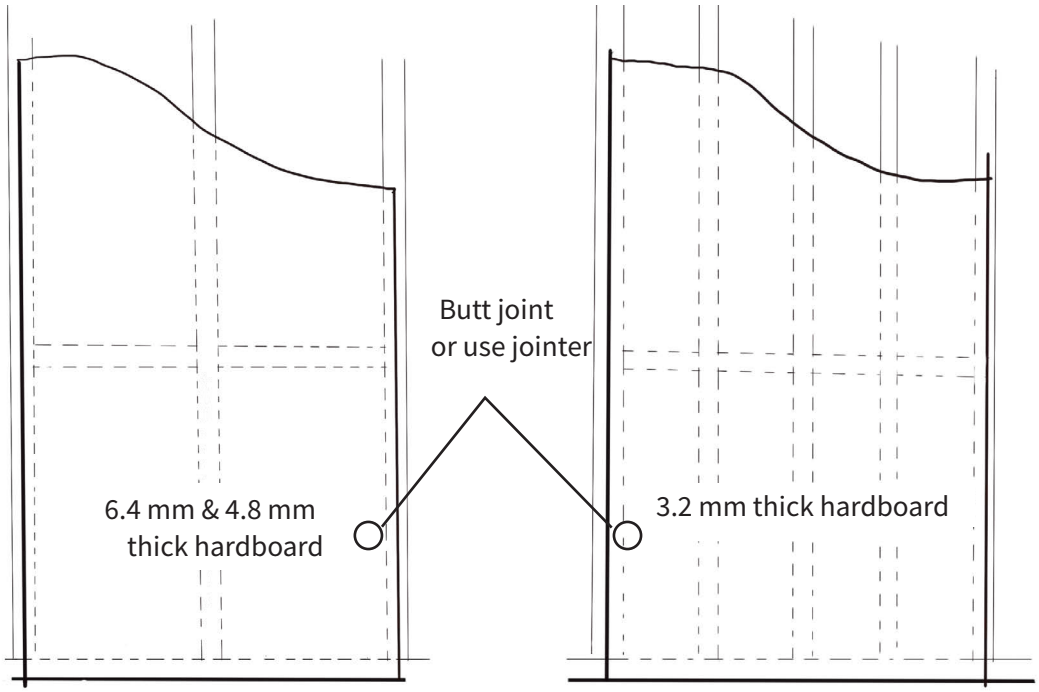
Check the substrate

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



Recommended Adhesives and Sealants

TABLE 2 - IBS FIBRE® Gloss recommended Adhesives and Sealants			
Tape	**Glue**	**Preparation**	**Sealant**
			Gorilla MS Sealant
			Gorilla 240FC MS
			Sika 123 MS Sealant

5.2 Adhesive Fixing

Adhesive Fixing

Use recommended construction adhesives on clean, dry surfaces. Apply continuous 5 mm beads at up to 450 mm centres. Press the sheet firmly into place and support until adhesive sets.

Use Laminex-recommended adhesives or suitable wallboard/construction adhesives for fixing Standard Hardboard to timber or metal framing, or over existing walls. Ensure all surfaces are clean and dry before application. Always follow the adhesive manufacturer's technical guidelines regarding temperature, environmental conditions, and application methods.

- Apply continuous adhesive beads (approx. 5 mm in diameter) directly onto the framing at 450 mm centres for 4.8 mm thick boards. For 3.2 mm boards fixed to solid backing, reduce spacing to 300 mm centres.
- Position the sheet immediately after applying adhesive and press firmly against the wall or frame. Support the panel during curing.
- For solvent or water-based adhesives that require a flash-off period:
- Press the sheet into place, then remove it to allow the adhesive to become touch dry.
- Reposition the sheet carefully, then press it firmly using a felt-faced hammer block.
- Clean off any excess adhesive immediately using a soft cloth with mineral turps, kerosene, or water (as appropriate).

Repeat the process for all remaining sheets, supporting panels as needed while the adhesive sets.

If using solvent or water-based adhesives:

* Press and remove sheet to let adhesive flash off.

* Reposition and tap down using a felt-faced block.

* Wipe off any excess adhesive with a cloth and appropriate cleaner (turps, kerosene, or water).

Repeat for all sheets, ensuring each is supported until fully cured.

5.3 Trimming

Attach inside/outside corner trims with adhesive to the substrate, using a small bead of adhesive.

Apply a bead of sealant into each of the channels of the trim to prevent water reaching the substrate.

Attach universal J trims (to finish the terminal end of sheets) by sliding into place on the sheet's edge.

Do not apply adhesive within a few centimetres of the edge of the sheet. Apply a bead of sealant into the receiving channel of the trim and press into place.

Attach L trims (to cover an old existing exposed tiles) by pressing the trim into place with a bead of sealant on both the sheet and the substrate.

External corner mould

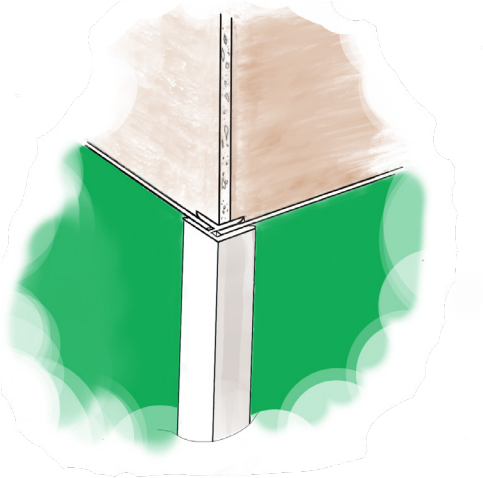


Figure 5

Internal corner mould

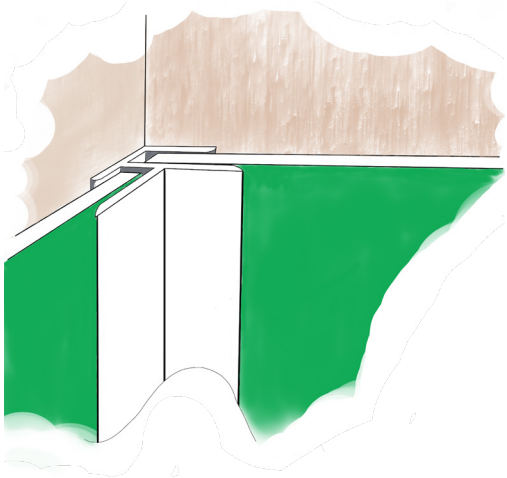


Figure 6

Panel vertical jointer

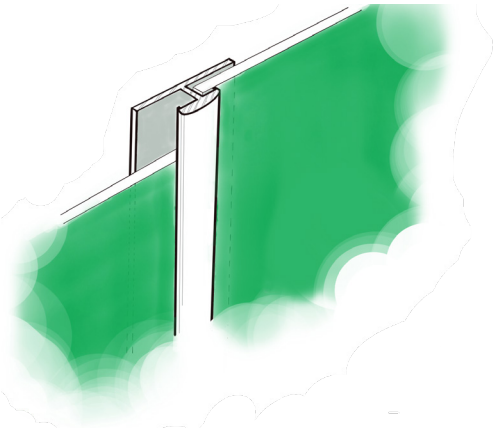


Figure 7

Top finishing mould

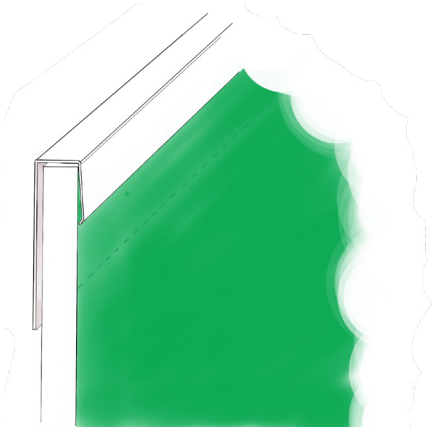


Figure 8

5.4 Creating Openings

To create openings for outlets and switches, mark the area to be removed. At the corner, drill a 15-18 mm diameter hole and cut the remainder of the hole with a fine-tooth jigsaw. Cut from the reverse side as a jigsaw can create scratches to the surface finish.

For circular holes, mark out the area to be removed and drill a series of holes as close as possible to the other using a sharp 3.5 mm – 5.0 mm speed bit. Finish off with a utility knife and push waste material through. Alternatively, a sharp, fine-toothed hole saw of the correct diameter may be used. (See Figures 9, 10.)

Marking area to be removed

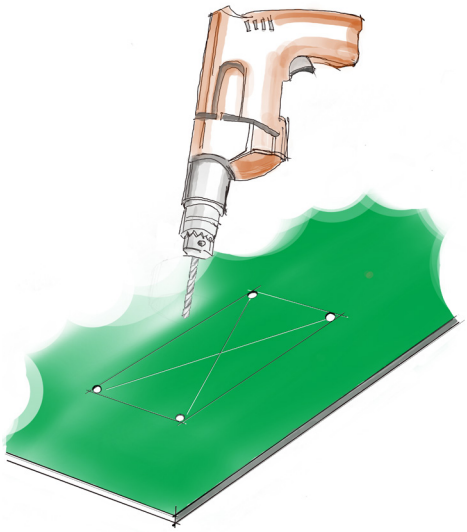


Figure 9

Drilling Circular hole

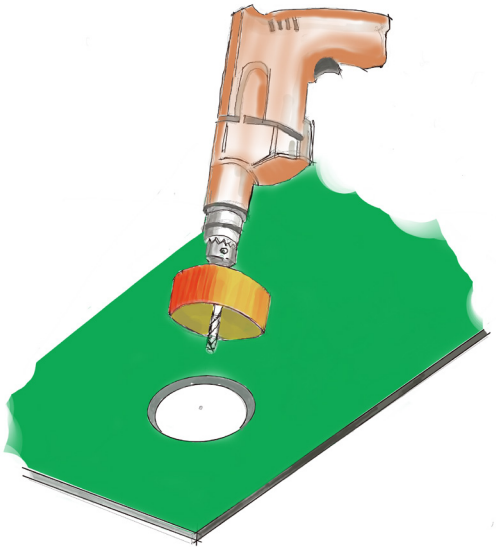


Figure 10

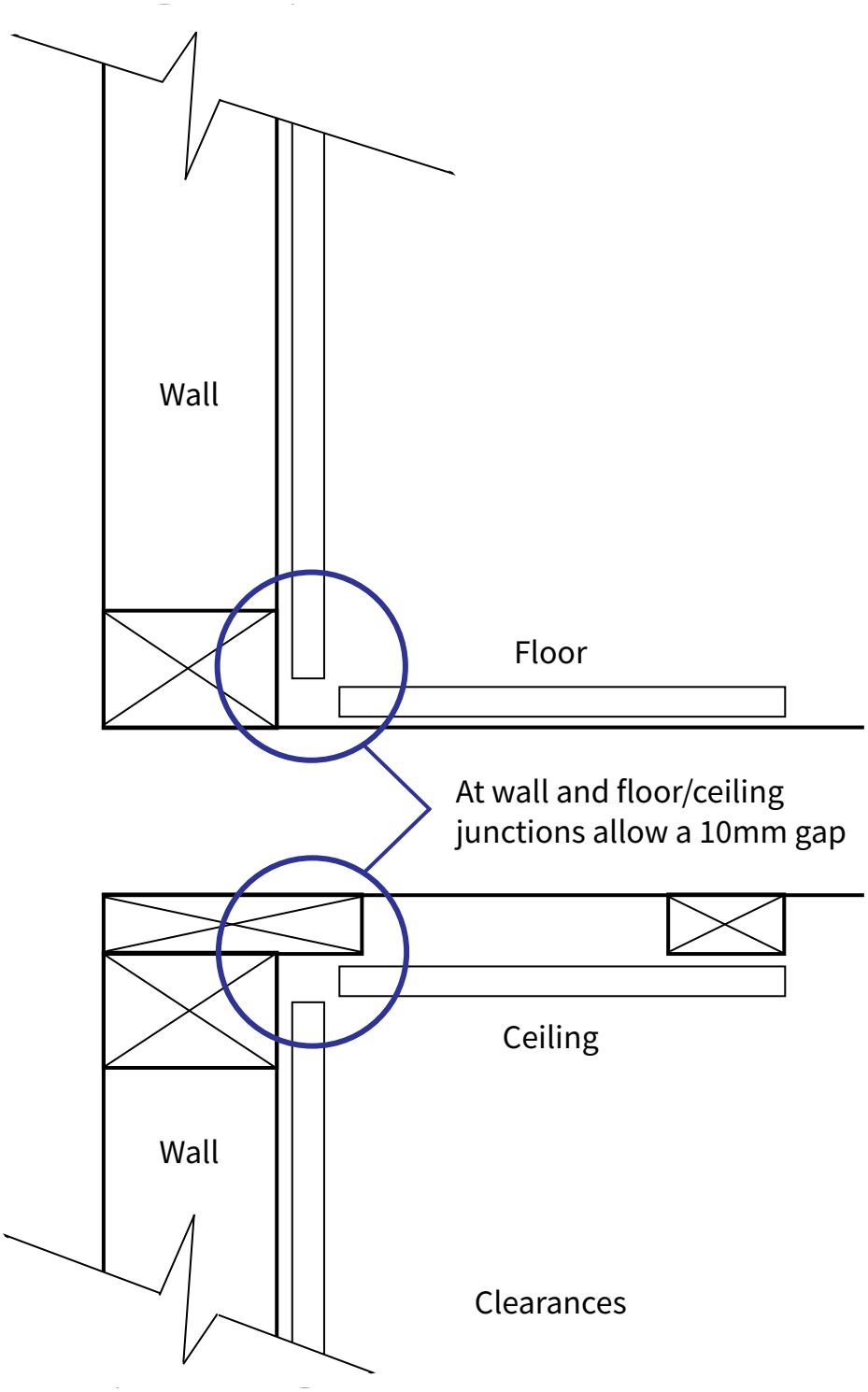
Cut sheets

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.

Install insulation

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

Fig 2- Typical Sheet fixing



Notes:
Make sure the edges are securely braced and the timber braces are aligned with the solid framing behind

Figure 13

5.5 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, in beads of approximately 5 mm in diameter to the substrate at all fixing points, in accordance with the adhesive manufacturer's requirements.

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.

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.

5.6 Flooring Underlay Installation

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

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.

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.

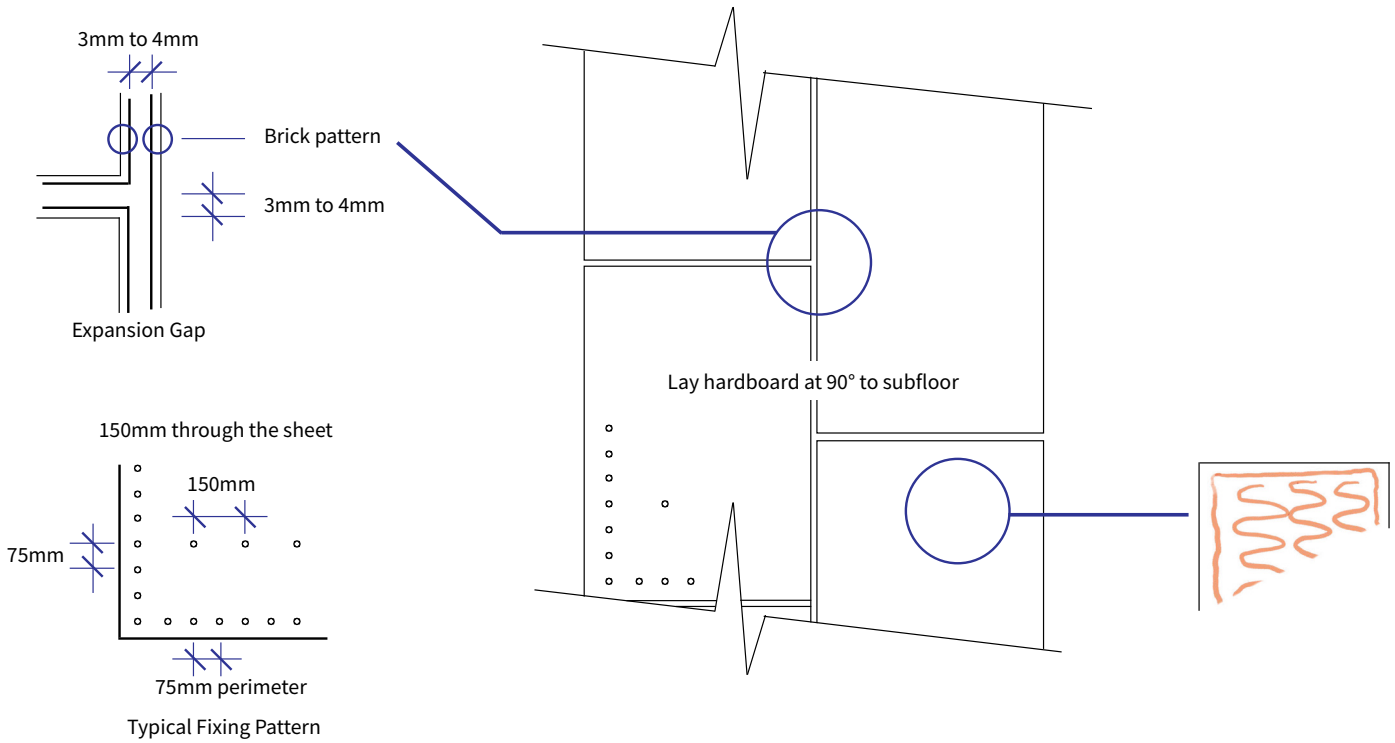
Cut sheets

Cut sheets to fit the layout.

Install flooring underlay

Fasten the sheets

Fixing sheets depends on the substrate.



Typical Fixing Pattern

Fix the sheets as follows:

To fix to a plywood, EUROFloor 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.

5.7 Painting – Standard Hardboard

Standard Hardboard must be sealed with a primer before painting. Fill any holes, lightly sand, and follow the paint manufacturer's recommendations.

Apply finishes using a brush, roller, or spray. After sealing, use:

- Two coats of flat, low-gloss, or semi-gloss acrylic paint; or
- One alkyd undercoat followed by one or two alkyd finish coats.

5.8 Painting – Tempered Hardboard

Tempered Hardboard also requires priming before painting. Fill, sand, and apply finishes as per paint manufacturer instructions.
Use the same coating systems as for Standard Hardboard.

5.9 Floor Surfacing – Tempered Hardboard

6.4 mm Tempered Hardboard can be used to resurface timber or concrete floors, especially in renovations.

- Suitable for loose-lay coverings like carpet or for coating with floor finishes.
- Recommended sheet size: 1830 x 1220 mm
- Not suitable in wet areas or where grease/oil is present.
- Not intended for vinyl or tile underlay.

Note: Not recommended for dance/stage floors where stiletto heels may cause indentations.

Layout

Condition sheets before laying. Install smooth side up, in an ashlar pattern, with long edges at right angles to floorboards.

Avoid aligning joins with floorboard joins

Bevel edges and leave:

- 1.5 mm gap between sheets
- 10 mm clearance around room edges and fixtures

Fixing

- Screw sheets down for easy future removal.
- Pre-drill and countersink holes
- Space screws every 150 mm around edges, 10 mm in from sheet edge
- Avoid self-embedding screws
- Fix from sheet centre outwards

5.10 Timber Floors

Subfloor Preparation
Ensure floorboards are solid, clean, and level. Replace damaged boards and sand any irregularities. Check hardboard sheets are square before installation.

Ventilation

Comply with NZBC E2 and/or NZS 3604 ventilation standards to ensure adequate airflow beneath the floor.

5.11 Concrete Floors

Preparation

- Concrete must be flat, dry, and free from dust, oil, or grease.
- For on-ground slabs, ensure a moisture barrier is present to prevent dampness affecting the hardboard.

Layout
Condition sheets and lay smooth side up in an ashlar pattern. Trim and bevel edges as with timber floors. Leave appropriate gaps and clearances.

Fixing
Install one sheet at a time using a suitable adhesive for bonding wood to concrete.

Leave a 1.5 mm gap between sheets and 10 mm clearance at the room perimeter and around fixtures.

Follow adhesive manufacturer’s instructions.

6. Finishing

6.1 Preparation

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.

6.2 Final Cleanup

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.

6.3 Sealants

All sealants must comply with the relevant New Zealand Building Code (NZBC) requirements and possess a current BRANZ Appraisal. They must be applied and used in accordance with the manufacturer's instructions. If sealants are to be coated, they must be compatible with the specified paint system.

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.

7. Care & Maintenance

7.1 Care & Maintenance

Under normal conditions, IBS Harboard boards will not need maintenance, other then regular cleaning.

If water damage does occur to an area where IBS Hardboard boards have been used, then they may need to be replaced. Do not use cream cleaners or harsh scrubbing methods. Use a soft cloth to clean. Commercial-grade chemicals should not be used.

Maintain the finish in accordance with the manufacturer's requirements.

This will depend on the finish chosen, but will typically include:

- Regularly washing or wiping clean protective surfaces.
- Ensuring the paint system is maintained.

8. Warranty

8.1 Warranty

Independent Building Supplies Limited (IBS) supplies sustainable building products, which when used and installed in accordance with all relevant instructions and specifications, will be fit for purpose.

As part of our commitment to performance, IBS provides a warranty in respect of IBS Hardboard (Product) in accordance with the following terms and conditions.

These terms and conditions must be read in conjunction with all product specific relevant and applicable technical documentation, information and guidelines published or referenced by IBS from time to time (Specifications) in relation to the Product.

1. IBS warrants that:

1.1 At the time of delivery to the merchant or site (where applicable) the IBS supplied Product will:

(a) be free from freight related defects;

(b) be free from defects that may have arisen through defective factory workmanship or materials; and

(c) conform to the performance characteristics listed on the applicable pass™ (warranted condition).

1.2 Once installed properly and in accordance with all appropriate Specifications the Product will continue to meet the relevant provisions of the building code as described on the applicable pass™ (warranted performance).

2. Date warranty valid:

2.1 IBS warrants:

(a) the warranted performance for 15 years from proven date of purchase or dispatch from IBS whichever date is the earlier; and

(b) the warranted performance for the durability period as specified by the NZ Building Code.

The durability period begins from the date the product is first installed or two months after the date of delivery, whichever is the earlier.

2.2 All enquiries relating to this warranty must (in the first instance) be directed to the place of purchase, the supplier or the installer.

2.3 By submitting a claim under the warranty, you grant IBS and its agents, consultants and contractors full rights of access, at no cost and at any reasonable time, to the relevant building to inspect the Product and the installation method for the purpose of determining the validity of the claim.

3. In the event a breach of the warranty is proven, the following applies:

3.1 For any valid and accepted breach of a warranty, IBS will, in its sole discretion, either:

(a) repair, replace or rectify the defective Product; or

(b) refund the purchase price of the defective Product. Where applicable the value will be reduced pro-rata, based on the remaining life of the Product (as set by the relevant durability requirements of the NZ Building Code).

3.2 Any action taken by IBS in satisfaction of a warranty claim shall constitute full and final settlement of all claims and IBS's total liability related to a breach of the warranty is limited to the direct cost to IBS of performing either of the above options.

3.3 IBS reserves the right to supply other comparable materials or products should the warranted Product no longer be supplied by IBS.

4. This warranty is subject to the following:

4.1 Receipt of evidence of the date of purchase of the Product.

4.2 Evidence satisfactory to IBS of failure of the Product.

4.3 Receipt of a written claim from the claimant either within 30 days of when the defect or failure of the Product would have become reasonably apparent or, if the defect was reasonably apparent prior to installation, then the claim must be made prior to installation.

4.4 The claim must include full details of the alleged defect in the Product.

4.5 Evidence satisfactory to IBS that all design, storage, transport, installation and maintenance requirements for the Product have been met or carried out in accordance with the Specifications and in terms of best building practice and the building code.

4.6 The warranty does not cover failure or problems caused by defective use, failure relating to improper design of the project structure, structural failure, settlement, movement of materials to which the Product is attached or dependent on, acts of God including but not limited to earthquakes, cyclones, floods or other severe weather conditions, inadequate maintenance, growth of mould, mildew, fungi, bacteria or any organism on any Product , or acts or omissions of a third party over whom IBS has no control.

4.7 The warranty does not cover failure or loss arising from the failure to follow all relevant IBS advice and requirements or failure to adhere to the Specifications.

4.8 Normal wear and tear, including non- performance related changes, are excluded from this warranty.

4.9 All relevant information relating to the Specifications is uncontrolled in printed format and is available from IBS (refer to www.ibs.co.nz).

5. Limitations

5.1 IBS will not be liable for a warranty claim unless:

the use of the Product meets the installation, storage, transport, use and maintenance requirements and Specifications in respect of the Product and the customer is responsible to ensure these are received and understood; and (b) the claim procedure set out in these terms is correctly followed and the required information is provided.

5.2 IBS will in no circumstances be liable for:

(a) any damage or loss caused by a person other than IBS, or by any other factor outside IBS's reasonable control, including without limitation fire, moisture, lightning, liquid, strike or lockout, chemicals, insects or animal;

(b) any damage or loss caused or contributed to by incorrect or improper use or a failure to comply with all Specifications and all applicable building codes, regulations and legislation;

(c) neglect, abuse, misuse, growth of mould/ mildew/fungi/bacteria or other organism; or

( ) any direct or indirect loss, or consequential loss or damage, of any kind.

5.3 All warranties, conditions, liabilities and obligations implied by law or custom (other than the warranties in these terms) are excluded to the fullest extent permitted by law, and without limitation, where the Product is provided for the purposes of trade, the provisions of the Consumer Guarantees Act 1993 shall not apply.

5.4 Except as provided in these terms, IBS will not be liable (under legislation, contract, tort, or otherwise including in equity) in respect of any defects in the Product or for any other cost, expense or liability caused by or related to the use of the Product.

9. Technical Properties

Material Composition: Manufactured from FSC-certified eucalyptus wood fibres without added chemicals or resins, ensuring a clean and safe product.

Formaldehyde Emissions: Holds a Super E0 rating, meaning very low formaldehyde emissions suitable for indoor environments.

Density & Strength: High density at minimum 940 kg/m^3, providing excellent durability and resistance to impact. Meets EN standards for bending strength and internal bond for reliable performance.

Moisture & Stability: Manufactured to comply with EN 322/EN 622-1 for moisture content and EN 317/EN 622-2 for dimensional stability, minimizing swelling and warping.

Fire Performance: Classified D-s2,d0 under EN 13501-1 for thicknesses ≥6 mm, offering limited contribution to fire and low smoke production.

Environmental Credentials: Made from responsibly sourced materials with FSC certification, fully recyclable, and promotes healthy indoor air quality.

10. Additional Resources

10.1 Compliance and Information

For compliance & information of IBS Hardboard refer to:

- IBS Product Specification
- IBS Maintenance and Warranty of IBS Hardboard
- www.ibs.co.nz
- 0800 367 759

10.2 Designing outside of scope

If you're designing or installing a product that deviates from these specifications or the guidelines in this design and install guide, please note that this will void any warranty claims unless specifically approved by IBS prior to any works starting.

11. Frequently Asked Questions

Q. What is IBS Hardboard?

A. IBS Hardboard is a high-density fibreboard made from FSC-certified Eucalyptus, known for being stronger and denser than MDF or softboard, with a grain-free, smooth surface.

Q. What product variations are available?

A. IBS offers four types: Standard, Tempered, Pegboard, and Flooring Underlay.

Q. Where is Standard Hardboard typically used?

A. Ideal for applications requiring a flat, paintable surface, such as wall substrates, joinery, doors, panelling, and DIY projects.

Q. What benefits does Tempered Hardboard offer?

A. Tempered Hardboard is treated with linseed oil and baked, enhancing moisture resistance, rigidity, and tensile strength—suited for demanding environments like bathrooms and automotive interiors.

Q. What is Hardboard Pegboard for?

A. Precise pre-primed panels perforated for hooks, ideal for workshops, garages or retail displays, and offering noise reduction benefits.

Q. What makes Hardboard Underlay special?

A. calibrated underlay designed for vinyl floor coverings, it provides a flat, indent-resistant substrate over timber, particleboard, plywood, or concrete.

Q. How safe is IBS Hardboard indoors?

A. It has a Super E0 formaldehyde emission rating, meaning ultra-low emissions—comparable to natural wood—ideal for indoor use.

Q. Is IBS Hardboard durable?

A. Yes it's impact resistant, does not split or crack, and withstands heavy-duty usage.

Q. Is the surface ready to finish?

A.Yes it features a smooth, uniform finish perfect for painting, laminating, veneering, or other surface treatments.

Q. Is it easy to handle and work with?

A. Absolutely it's clean-cutting, safe to mill, and compatible with standard woodworking tools, making it ideal for both DIYers and professionals.

Q. How is IBS Hardboard environmentally sustainable?

A. Made from sustainably sourced wood fibres and free of added resins or formaldehyde-based adhesives, it supports environmental responsibility and waste reduction.

Q. What are the available sheet sizes and weights?

A. Standard Hardboard: 2400×1200×3.2 mm (≈9 kg), 4.8 mm (≈14 kg), 6.4 mm (\~19 kg)

Tempered: 2440×1220×4.8 mm (\~14.4 kg)

Underlay: 1220×915×5 mm (\~5.6 kg)

Pegboard: 2440×1220×4.8 mm (\~14.4 kg white, \~13.4 kg black)

Let me know if you'd like this formatted for web, social, brochure, or anything else.

12. Limitations

When you are specifying and installing IBS Hardboard the Installation Guide must be followed.

IBS Hardboard should not be installed on timber framing where the moisture content is greater than 18%.

When used as a wall lining ensure stud centres do not exceed 600mm.

The overleaf installation checks are considered critical to the successful installation of IBS Hardboard. Using this sheet as a checklist during installation will aid in problem free product installation and long term product durability post construction.

- Not suitable for exterior applications or areas exposed to direct weathering.
- Must not be installed near heat sources without appropriate separation.
- Installation must follow the procedures outlined in the official IBS Hardboard Design & Installation Guide to maintain warranty and compliance.

IMPORTANT NOTES:
All sections of this checklist should be completed in full.

Careful adherence to technical specification literature is critically important for completing IBS Hardboard cement construction. The construction shall comply with requirements of building consent. Any variations made should be approved by the BCA prior to work being undertaken.

Notes:

13. Installation checklist

Installation checklist for IBS Hardboard based on the information available:

	Items to be checked	✓ Tick ☐	Notes
	1. Pre-Installation Checks		
1	Ensure substrate is straight and true, framing accurately gauged (per NZS 3604 tolerances)	☐	
2	Check moisture content of framing ≤18 %, substrate dry to equilibrium	☐	
3	Verify adequate framing support along all sheet edges and fixings	☐	
	2. Cutting & Handling		
9	Store sheets flat, off the ground, in a dry, covered area	☐	
10	Use dust masks, eye protection, and ensure proper ventilation	☐	
11	For cutting: use carbide-tipped or fibre-cement blades, in dry environments	☐	
12	For drilling: use tungsten carbide drills (60-80° point angle)	☐	
13	Follow recommended aperture cutting methods for electrical/service penetrations	☐	
	3. Fixing Sheets		
14	Framing centres ≤600 mm for walls; ceilings ≤600 mm (often ≤480 mm for thinner sheets)	☐	
15	Fixing types & centres: galvanised nails or countersunk screws, ~200 mm spacing; use stainless steel in coastal zones	☐	
16	Conceal fixings on ceilings—countersunk screws, fill with epoxy, sand flush		
17	All sheet edges must be backed—nogs, dwangs, battens as required		

	4. Sealants & Junctions		
15	Seal all sheet edges and around penetrations (doors, windows, services) before installation	☐	
16	Use NZBC-compliant sealants, applied per manufacturer's instructions	☐	
17	Follow jointing guidelines—flush, grooved PVC, timber mouldings or sealant-filled techniques	☐	
18	Install control joints where soffits/ceilings exceed continuous lengths or change direction	☐	
	5. Clearances & Limitations		
18	Ensure drip edge ≥15 mm under soffits (grooved fascia or cladding)	☐	
19	Don't install on wet or high-moisture framing (>18 %)	☐	
20	Observe framing spacing limits: ≤600 mm stud centres, nog/dwang spacings per spec	☐	
21	Use stainless steel fasteners in coastal/sea-spray environments	☐	
	5. Finishing		
21	Seal back edges + 150 mm around perimeter on back face prior to installation	☐	
22	Use high-quality exterior paint (AS 3730-compliant); low-sheen or enamel 3-coat system	☐	
23	Ensure LRV ≥40% for uPVC flashings to avoid thermal expansion issues	☐	
24	Apply paint only when ambient temperature ≥10 °C	☐	

IBS Hardboard

Design & Installation Guide

IBS
SUSTAINABLE BUILDING PRODUCTS

Scan the QR code to view all IBS Hardboard documents.

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