IBS V-Groove Ply

Design & Installation Guide

February 2026

IBS SUSTAINABLE BUILDING PRODUCTS

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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 V-Groove Ply**
- **IBS Builders Grade® Ply**
- **IBS Formply**
- **IBS Decorative Ply**
- **IBS PanelLine®**
- **IBS Showerline**
- **IBS Softboard**
- **IBS Hardboard**
- **IBS Pegboard**
- **IBS Acoustic Panels**
- **IBS Mini Panels**

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NZBN 9429000097253

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1. Introduction

This guide provides advice on handling, installing and maintaining IBS V-Groove Ply.

1.1 Introduction

IBS V-Groove Ply is a premium plywood panel engineered to deliver the timeless look of traditional timber tongue and groove linings with the strength, reliability, and consistency of modern plywood manufacturing. Featuring a clean, smooth face with precisely machined V grooves at 100 mm centres, it provides a refined decorative finish suitable for a wide range of interior applications, including wall linings, ceiling linings, feature walls, and partitions.

Lightweight, easy to handle, and simple to install, IBS V-Groove Ply is designed to help builders and DIY users achieve high quality results with minimal effort. The product is available in both untreated and **H3.1 LOSP treated** options, making it suitable for general interior use as well as sheltered exterior environments where additional durability and resistance to moisture, rot, and fungal attack are required.

Crafted to meet stringent quality and performance standards, IBS V-Groove Ply offers dependable strength, impact resistance, and longevity, making it the ideal choice for projects that demand both practicality and aesthetic appeal.

1.2 Skill Requirement

Installing IBS V-Groove Ply is suitable for **competent DIYers, experienced handypersons, and professional tradespeople**, provided they are familiar with standard carpentry tools and safe installation practices. The panels are lightweight and easy to handle, making them accessible for straightforward interior projects such as feature walls or ceiling linings.

However, **some installations may fall under Restricted Building Work (RBW)**—for example, where the product forms part of a bracing element, contributes to structural performance, or is used in areas governed by building consent requirements. In these cases, **the work must be carried out by, or supervised by, a Licensed Building Practitioner (LBP).**

1.3 Scope

IBS V-Groove Ply is a versatile decorative plywood panel suitable for a range of **internal** and **sheltered external** applications. It may be used for:

- **Soffit lining (sheltered exterior only)**

  The H3.1 LOSP treated version is specifically designed for protected exterior areas such as soffits and eaves.

- **Ceiling lining**

  Provides a clean, smooth decorative finish for residential and commercial interior ceilings.

- **Dado / interior wall panelling**

  Ideal for feature walls, partitions, and wall linings where the look of timber tongue and groove is desired.

- **Back linings or interior cabinetry accents**

  The untreated version is suitable for dry internal environments and decorative use. IBS V-Groove Ply makes a great feature wall

Where IBS V-Groove Ply Cannot Be Used

Not suitable as an external cladding

IBS explicitly states that V Groove Ply (IBS V-Groove Ply) is **not to be used as an exterior cladding** or in any situation where it is directly exposed to the weather.

Not suitable for high moisture or wet areas

Untreated IBS V-Groove Ply must not be used in bathrooms, laundries, or any internal space where prolonged moisture exposure is expected.

1.4 What is IBS V-Groove Ply?

IBS V-Groove Ply is a high quality decorative plywood panel designed to replicate the timeless look of traditional timber tongue and groove linings. Manufactured with precision cut V grooves at 100 mm centres, it delivers a clean, consistent, and visually striking finish suitable for a wide range of interior and sheltered exterior applications. The product is lightweight, easy to handle, and crafted to meet the high durability and performance standards that IBS products are known for.

How is IBS IBS V Groove Ply Made?

IBS IBS V Groove Ply is produced using high quality Radiata pine veneers that are laid up in multiple cross laminated layers to enhance stability, reduce movement, and achieve strength that exceeds typical decorative sheet materials. Depending on the version, the product is available either **untreated** for internal use or **H3.1 LOSP treated** for protected external environments such as soffits.

Each sheet undergoes a full sanding process (150 grit) to create a smooth, even surface before the distinctive V grooves are machined into the face veneer. The precision manufacturing and strict quality control—performed by internationally certified mills—ensure consistency in appearance and performance.

Grade and Appearance

IBS V-Groove Ply is designed to combine structural integrity with an attractive decorative finish:

- **Face Grade:** A clean, smooth, visually appealing plywood face designed for interior finishes.
- **Profile:** V grooves at 100 mm centres mimic classic timber T&G panelling.
- **Finish:** Fully sanded for a uniform appearance suitable for paint or clear finishes.

- **Emission Rating:** Produced with **Super E0** low formaldehyde emissions for a healthier indoor environment.

Glue Line

IBS V-Groove Ply uses a **WBP A Bond phenolic glue line**, ensuring a durable, moisture resistant bond between veneers. This A Bond classification means the bond is suitable for both interior applications and sheltered exterior uses where occasional moisture exposure may occur, making the treated version appropriate for soffit areas.

The glue line also supports long term panel stability, resisting delamination and maintaining performance across varying humidity levels.

1.5 Product Description

Material: Plywood sheets manufactured in accordance with AS/NZS 2269:2012

Treatment: H3.1 LOSP or untreated

1.6 Size and applications

Table 1: IBS V-Groove Product Details

	L x W x Thickness (mm)	Weight (kg)	IBS Product Code	GTIN
IBS V-Groove Ply Untreated product details	2400 x 1200 x 9	14	VGAU092412	09421028767842
	2400 X 1200 X 12	18.7	VGAU122412	09421028762533
IBS V-Groove Ply H3.1 LOSP Treated product details	2400 x 1200 x 9	14.2	VGAT092412	09421028767859
	2400 X 1200 X 12	18.9	VGAT122412	09421028762526

1.7 Supporting info

This document must be read in conjunction with the:

- IBS V-Groove Ply Warranty.

2. Best Practice

2.1 Health & Safety

Ensuring safe handling and installation of **IBS V-Groove Ply** is essential for both installer wellbeing and product performance.

General Health & Safety Requirements

IBS installation guides refer installers to recognised national safety resources such as the Absolutely Essential Health & Safety Toolkit and WorkSafe New Zealand Quick Guides. These should be followed at all times to ensure compliance with safe working practices on site.

Work only in environments that are safe, well organised, and free from unnecessary hazards. Always ensure you are using the right tools and the correct personal protective equipment (PPE) for cutting, handling, fixing, or finishing the panels.

Personal Protective Equipment (PPE)

When cutting, sanding, or drilling IBS V-Groove Ply, PPE must always be worn to minimise exposure to dust and prevent injury:

- **Safety glasses** to protect against airborne debris.
- **Hearing protection** when using power tools.
- **Dust mask or respirator** (P2 or higher) during cutting or sanding tasks.
- **Gloves to protect hands from sharp edges or splinters.**
- **Steel cap boots on active construction sites.**

Handling & Manual Lifting

IBS boards should always be lifted safely to avoid strain and product damage.

- Carry sheets with **two people** when possible.
- Avoid bending, dropping, or dragging sheets to prevent structural or edge damage.
- Use proper manual lifting practices.

Working at Height

Where IBS V-Groove Ply is used for ceiling or soffit installations, ensure compliance with safe work at height requirements:

- Use properly secured ladders or certified access equipment.
- Ensure the working platform is stable, level, and free from obstructions.

2.2 Handling, Storage & Site Considerations

Handling

Careful handling of IBS V-Groove Ply is essential to prevent sheet damage and to ensure safe working conditions.

- **Two person lift recommended:** IBS panels are large sheets; always lift with two people to avoid strain and to prevent sheets from bending or cracking.

- **Keep sheets flat during handling:** Avoid flexing or dropping panels as this may damage grooves, edges, or face veneer.

- **Use appropriate lifting equipment:** When moving multiple sheets or packs, use forklift or pallet handling equipment. If crane lifting is required, only use approved lifting straps — never steel cables, which may damage panels.

- **Minimise dust exposure:** When cutting or sanding, work in ventilated areas and use dust extraction where possible.

Storage

Proper storage ensures panels remain flat, dry, and ready for installation.

- **Store sheets flat on level supports:** Do not lean sheets against walls or posts, as this can cause bowing. Keep entire packs supported evenly.

- **Keep dry and protected:** IBS V-Groove Ply must be stored indoors or in a dry, covered area until installation. Exposure to moisture can cause swelling, edge damage, or warping.

- **Leave protective wrapping intact:** Do not remove protective packaging until the installation area is fully prepared — this prevents premature exposure to dust, moisture, and UV.

- **Avoid long term site exposure:** If stored on site for extended periods, ensure weather protection is maintained and airflow is adequate to avoid condensation.

2.3 Transport to Site

- **Secure loads during transit:** Packs must be tied down firmly to prevent movement or edge damage during transport.

- **Deliver close to installation point:** Reduces manual handling and risk of damage. Where possible, transport directly to the floor level or area where panels will be installed.

2.4 Site Considerations

Before beginning installation, ensure the site and surrounding environment are suitable for receiving IBS V-Groove Ply:

2.5 Substrate & Building Condition

- **Ensure structure is weathertight:** before installing V Groove Ply internally. Internal applications must not be exposed to moisture or rain.

- **Check framing moisture content:** Timber framing should be at or below 18% moisture content prior to installation to avoid panel distortion after fixing.

- **Confirm level and true surfaces:** Substrates must be straight, plumb, clean and fully supported to achieve tight, accurate joins and prevent stress in the sheets.

2.6 Working Environment

- **Provide a dry, clean workspace:** Moisture and dirt can interfere with adhesive bonding and finishing quality.

- **Good ventilation required:** Particularly when cutting or sanding, to avoid dust accumulation and maintain worker safety.

- **Lighting:** Provide sufficient lighting to allow accurate fixing, joint alignment, and inspection of sheets prior to installation.

2.7 Safe Access & Work at Height

- Where IBS V Groove Ply is used for ceilings or soffits, ensure safe access using compliant ladders, scaffolds, or platforms.

- Ensure the work area is kept free of trip hazards, offcuts, cables, and loose tools.

2.8 Pre Installation Checks

Before installing IBS V-Groove Ply:

- Inspect each sheet for damage, moisture exposure, or manufacturing defects.
- Confirm product suitability (untreated for internal use; H3.1 LOSP for sheltered exterior soffits).
- Ensure all required tools, fixings, and adhesives are appropriate and available.

2.9 Tools & Equipment Required

Successful installation of IBS V-Groove Ply requires the correct tools and equipment to ensure accuracy, clean finishing, and safe working practices.

1. Cutting & Shaping Tools

Fine tooth hand saw or power skill saw
Recommended for clean, accurate cuts without splintering.
We would also recommend the use of a straight edge when using a power saw to give a nice clean line.
Plane or 120–150 grit sandpaper
For smoothing cut edges or lightly tidying groove edges.
Drill with 2.4 mm pilot bit
Required for pre drilling screw holes to prevent sheet splitting.
Hole Saw or Jig Saw
Required when making holes for any penetrations or switches.

2. Fixing Tools

Mechanical gun-driven pins, hand driven panel pins, or **annular groove nails / screws**
The appropriate fixing tools depend on whether IBS V Groove Ply is used for walls, ceilings, or soffits. These fixing types align with those recommended in the V Groove installation guide.
Screwdriver or impact driver
For installing countersunk wood screws when needed.
Construction grade panel adhesive
Used in conjunction with mechanical fixings to improve sheet bonding.

3. Measuring & Layout Tools
Measuring tape – For accurate sheet layout.
Chalk line or laser level – Ensures straight, consistent alignment of sheets and grooves.
Carpenter's square – For marking clean cross cuts and ensuring accuracy at sheet joins.

4. Safety Equipment

- Dust mask / respirator (P2 or better)
- Safety glasses
- Hearing protection
- Gloves

3. Durability & New Zealand Building Code Compliance

3.1 Durability Statement

IBS V-Groove Ply is manufactured from high quality plywood materials designed to provide long term performance when installed in accordance with this Design & Installation Guide. The product is produced to meet the durability expectations for internal linings and sheltered exterior applications, provided it is used in environ ments appropriate to its treatment level (Untreated or H3.1 LOSP).

When used internally—as wall linings, feature panels, ceiling linings, or dado panel ling—the product is not exposed to moisture or direct weathering, allowing it to achieve its expected service life with minimal maintenance. For sheltered exterior applications such as soffits, only the **H3.1 LOSP treated** version may be used, help ing ensure resistance to moisture, fungal attack, and decay consistent with New Zealand durability requirements.
These durability expectations align with how IBS positions its sheet products across the broader plywood range, where material quality, correct installation, and appropriate treatment selection are essential to long term product performance.

3.2 Compliance with the New Zealand Building Code (NZBC)

IBS V-Groove Ply, when installed according to this guide, contributes to compliance with the following clauses of the **New Zealand Building Code:**

3.3 B1 – Structure

IBS V-Groove Ply provides a stable, dimensionally consistent lining material when fixed to compliant framing. It is not intended as a structural bracing element; however, when used as an internal lining, it performs within expected stiffness and stability ranges for decorative plywood linings. The general structural compliance approach used by IBS for plywood products follows NZBC Clause B1 requirements.

3.4 B2 – Durability

When installed, finished, and maintained in accordance with IBS recommendations, IBS V-Groove Ply satisfies the durability performance requirements of **NZBC Clause B2**, specifically Clause B2.3.1(c) for internal building components with a minimum 5 year durability requirement and Clause B2.3.1(b) when treated H3.1 panels are used in sheltered external environments such as soffits.

3.5 E2 – External Moisture (for sheltered soffit use only)

The H3.1 LOSP treated variant of IBS V-Groove Ply may be used in **protected soffit applications**, where it is not directly exposed to wind driven rain or standing moisture.

The compliance pathway follows similar moisture management expectations to **NZBC Acceptable Solution E2/AS1** for protected areas.

3.6 F2 – Hazardous Building Materials

IBS V-Groove Ply does not contain hazardous materials likely to cause injury under normal installation and occupancy conditions.

3.7 Prohibited Uses (Compliance Conditions)

To ensure NZBC compliance, the following restrictions apply:

- **Not suitable as external cladding**—IBS V-Groove Ply must not be used in direct weather exposure, consistent with IBS restrictions for similar products.
- **Not suitable for wet interior areas** such as bathrooms, laundries, or commercial wet zones unless specifically protected by a compliant lining or finishing system.
- **Framing moisture content must be ≤18% at installation**
- **Installation must follow this guide**; deviations may void compliance and compromise durability performance.

3.8 Defects

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

3.9 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 will result in the warranty being voided.

3.10 Conditions of Use

IBS V-Groove Ply must be installed and used only under the following conditions to achieve its intended durability, performance, and compliance with the New Zealand Building Code.

1. Appropriate Applications

IBS V-Groove Ply is suitable for:

- **Internal applications** such as wall linings, ceiling linings, dado panelling, and feature walls.

- **Sheltered exterior applications** such as **soffit linings**, but **only when the H3.1 LOSP treated version is used.**

The untreated variant is for interior use only and must not be exposed to moisture or exterior conditions.

2. Environmental & Site Conditions

The following conditions must be met before and during installation:

- The building must be **weathertight** before any interior IBS V Groove Ply is installed.
- Store and install only when **site moisture is controlled**; sheets must remain dry prior to installation.
- Ensure the installation area is **clean, dry, and well ventilated.**
- Installation should not proceed if sheets show any signs of moisture uptake, swelling, damage or deformation.

3. Compliance Related Conditions

To ensure compliance with the New Zealand Building Code (NZBC):

- Use the **H3.1 LOSP treated version** for any sheltered exterior application to meet NZBC Clause B2 Durability requirements.
- Follow all installation instructions for fixings, expansion gaps, and substrate preparation to maintain compliance with Clauses **B1 (Structure)** and **B2 (Durability)**.
- Where installation forms part of **Restricted Building Work (RBW)**, it must be carried out or supervised by a **Licensed Building Practitioner (LBP)**.

4. Installation Conditions

These conditions must be met during installation:

- All cut edges of **H3.1 LOSP** panels must be **re treated/sealed** to maintain durability performance.
- Maintain correct sheet spacing, fixing patterns, and adhesive usage as specified in this guide.
- Do not install over substrates that are uneven, out of plumb, or inadequately supported.

5. Maintenance Conditions

To ensure ongoing performance:

- Maintain protective coatings or paint systems as required by the finish manufacturer.
- Inspect soffit areas periodically for moisture ingress, especially in coastal or high humidity environments.
- Replace damaged or swollen panels promptly to prevent further deterioration.

4. Design Considerations – Wall Lining Applications

When using **IBS V-Groove Ply** as an internal wall lining, careful planning and design are essential to ensure a high quality finish, long term performance, and compliance with installation best practice. The following considerations must be applied during the design phase.

4.1 Substrate & Framing Requirements

- **Timber framing moisture content must be ≤18%** before installation to avoid sheet movement, swelling, or fixing failures.
- Ensure framing is **straight, plumb, rigid, and adequately supported,** as IBS V Groove Ply sheets will echo imperfections in the substrate.
- **Stud spacing should be 400–600 mm centres**, consistent with lining system require ments used for similar IBS decorative plywood products.
- All sheet edges must land on framing or be otherwise fully supported.

4.2 Sheet Orientation & Layout

- IBS V-Groove Ply can be installed vertically or horizontally, depending on the desired aesthetic and framing layout.
- When installed horizontally, align grooves consistently to maintain a uniform shadow line.
- Plan sheet layout to minimise visible joints and to avoid narrow offcuts at corners or openings.

4.3 Allowance for Movement

- As with all timber based linings, IBS V Groove Ply must be installed with consideration for natural timber movement.
- Provide a **small expansion gap** at sheet perimeter junctions, skirting lines, and internal corners.
- For painted finishes, plan for joint treatment and movement control using suitable sealants or trims.

4.4 Fixings & Adhesives

- Combination fixing (mechanical fasteners + panel adhesive) provides the best long term performance and minimises surface deflection between studs.
- Fastener type, spacing, and pattern must follow the Installation section of this guide and reflect those recommended for IBS V Groove Ply.
- For ceilings or high movement areas, additional fixings may be required.

4.5 Cut Edge Treatment & Finishing

- **For H3.1 LOSP treated IBS V Groove Ply**, all cut edges must be re **treated or sealed**, especially in areas where moisture fluctuations may occur.
- When specifying painted finishes, consider that IBS V Groove Ply is supplied with a smooth sanded face, but additional sanding or priming may improve final appearance.

4.6 Service Integration (Electrical & Plumbing)

- Plan for wiring, outlets, switches, and recessed features before lining begins.
- Penetrations must be cleanly cut and kept tight to maintain the decorative look.
- Do not cut through structural framing members without a designer's approval.

5. Design Considerations – Ceiling Lining Applications

When specifying **IBS V-Groove Ply** as a ceiling lining, careful design planning is essential to ensure correct performance, a high quality finish, and a long service life. The following design considerations must be applied before installation.

5.1 Framing Requirements

- **Framing moisture content must be ≤18%** before any lining is installed to avoid movement, swelling, or surface irregularities.
- Ceiling battens, joists, or rafters must be **straight, plumb, level, and rigid**. Because IBS V Groove Ply has a smooth decorative finish, any deviations in the substrate will show through.
- Maximum support spacing should follow standard lining practice—typically **400–450 mm centres** depending on the ceiling structure and expected load.

5.2 Sheet Orientation & Aesthetic Continuity

- Sheets may be installed **parallel or perpendicular** to ceiling framing, depending on the design intent. Although we recommend perpendicular for best results.
- Consider the direction of the **V grooves** to create consistent visual flow across the ceiling.
- Avoid narrow end cuts at perimeter areas whenever possible—plan sheet layout so that groove spacing and joint lines remain balanced and visually deliberate.

5.3 Movement & Expansion Allowances

- Timber based products naturally expand and contract with temperature and humidity changes.

- Provide appropriate perimeter expansion gaps at junctions with walls, beams, sky light wells, and trims.
- When finishing with paint, ensure that flexible fillers and sealants (appropriate for timber linings) are used in areas where movement is anticipated.

5.4 Structural Performance & Fixings

- Ceilings are subject to sagging, vibration, and movement; therefore, IBS V Groove Ply must be fixed **using both mechanical fasteners and panel adhesive** for optimal stability.
- Fixings must follow the prescribed fixing pattern for ceilings, **using annular groove nails or screws** and suitable construction grade adhesives.
- Ensure all sheet edges and mid spans have adequate support to prevent long term sagging.

5.5 Weight, Handling & Installation Access

- Although IBS V-Groove Ply is lightweight, ceiling installation requires careful handling overhead.
- Confirm adequate access for lifting sheets into position, especially in confined areas such as hallways, stair landings, or small rooms.
- For larger installations, consider whether a **panel lifter** or additional labour is required.

5.6 Service Integration (Lighting, HVAC, Wiring)

- Plan all penetrations—downlights, vents, ceiling speakers, access panels—before installation.
- Ensure that fixtures requiring clearance or heat dissipation (e.g., recessed down lights) comply with manufacturer requirements.
- Keep penetrations tight to the fixture trim to maintain the decorative quality of the lining.

5.7 Moisture & Environmental Considerations

- IBS V-Groove Ply must be installed **only in dry interior environments** unless using the **H3.1 LOSP treated version** in sheltered soffit applications.
- Do not install in areas prone to condensation, high humidity, or water vapour unless additional compliant lining systems are specified.
- Avoid installation before the building is made **weathertight,** as ceiling linings are highly susceptible to moisture absorption.

5.8 Finishing & Coating Requirements

- The smooth sanded face is suitable for paint, clear finishes, or stains.
- Consider the use of sealing primers to prevent uneven absorption.
- Ceiling lighting can highlight surface imperfections—ensure framing, fixing, and sanding are completed to a high standard.

6. Fixing Details – Wall Lining Applications

Correct fixing of **IBS V-Groove Ply** is essential to achieving a high quality finish and long term performance. The following fixing requirements apply when the product is used as an **internal wall lining.**

6.1 General Fixing Requirements

- Fix IBS V-Groove Ply to timber framing or battens that are **straight, plumb, and with ≤18% moisture content.**
- Sheets may be installed vertically or horizontally, provided all edges are fully supported.
- For best performance, use a **combination of mechanical fixings and panel adhesive**.

6.2 Mechanical Fixings

The following fastener options may be used depending on the finish quality required:

Panel Pins (Recommended for Clean Finish)

- **Gun driven panel pins or hand driven panel pins**
- Ideal where a minimal visibility fixing is preferred.
- Use with Panel adhesive for best performance on walls.

Nails

- 40 × 2.0 mm jolt head nails when a more robust fixing is desired.
- Use with panel adhesive for best performance on walls.

Screws

- 8g × 30–32 mm countersunk wood screws may be used when screw fixing is preferred
- Ensure screws are driven flush and do not over tighten to avoid sheet distortion.
- **For Steel Framing**
- **Self drilling Tek screws**, fine thread, suitable for fastening plywood to thin steel studs.
- **10g × 30–40 mm** countersunk self drilling screws for most internal lining applications.
- For soffits or higher moisture environments, use **stainless steel self drilling screws**.

6.3 Pilot Drilling

- When using screws, **predrill 2.4 mm pilot holes** to prevent splitting.
- Drill holes approximately **2–3 mm deeper than screw length.**

6.4 Fixing Pattern & Spacing

Unless specified otherwise in the project documentation, apply the following best practice spacing:

- **Edge Fixings:** Fix at 150 mm centres along all sheet edges.
- **Intermediate Fixings:** Fix at 300 mm centres across intermediate studs.
- **Minimum Edge Distance:** Fasteners must be placed no closer than 7–10 mm from sheet edges to avoid veneer breakout.

6.5. Use of Adhesive

- Apply a **high quality construction panel adhesive** to all framing contact lines before placing each sheet.
- Adhesive helps reduce panel movement, improves wall flatness, and minimises risk of surface nail pop.
- Mechanical fixings must still be used — adhesive alone is not sufficient.

6.6 Jointing & Sheet Alignment

- Ensure grooves align between sheets for a consistent decorative finish.
- Maintain small movement gaps at internal corners, perimeters, and junctions with other materials.
- Use appropriate trims, mouldings, or flexible sealants as required by the design.

6.7 Finishing Over Fixings

- Fill nail or screw holes using a **flexible, paintable wood filler** before final sanding and coating.
- Sand lightly after filler cures to achieve correct surface smoothness.

7. Fixing Details – Ceiling Lining Applications

Correct fixing of **IBS V-Groove Ply** is critical to achieve a stable, high quality ceiling finish. The requirements below apply when installing the product as **internal ceiling lining (untreated)** or as **sheltered exterior ceiling/soffit lining (H3.1 LOSP treated).**

7.1 General Requirements for All Ceiling Installations

- Ceiling framing or battens must be **straight, level, and with ≤18% moisture content** before installation.
- All sheet edges and sheet mid spans must be fully supported.
- Use **both mechanical fixings and panel adhesive** for optimal performance, consistent with recommended practice in the V Groove Ply guide.
- Maintain required expansion allowances at perimeters, junctions, and trims. Expansion gaps should be a 10mm gap at wall ends and a 3mm expansion joint every 6 meters.

A. INTERNAL CEILING LINING (Untreated IBS V-Groove Ply)

7.2 Approved Mechanical Fixings

Nails (Recommended)

- **40 × 2.0 mm jolt head nails** with panel adhesive. Suitable for most internal ceiling lining applications and provides reliable holding strength.
- Always use Panel Adhesive also

Panel Pins (For Cleaner Finish)

- Gun driven finishing pins used in combination with adhesive. Ideal where minimal visible fixing is desired.
- **Always use Panel Adhesive also**

Screws

- **6 g × 30–32 mm countersunk wood screws** may be used, especially where higher pull-out strength is required.
- **Always use Panel Adhesive also**

7.3 Pilot Drilling

- When screws are used, predrill 2.4 mm pilot holes to prevent splitting of sheet edges.
- Drill holes 2–3 mm deeper than screw length to ensure clean fixing.

7.4 Fixing Pattern & Spacing

- Edges: Fix at 150 mm centres.
- Intermediate battens or ceiling joists: Fix at 300 mm centres.
- Minimum edge distance: Keep fixings 7–10 mm from sheet edge to avoid veneer breakout.

7.5 Adhesive Application

- Apply a continuous construction grade panel adhesive bead along all framing contact lines.
- Press sheet into place immediately, then secure with mechanical fixings

7.6 Finishing

- Fill visible fastener holes with flexible wood filler, then sand lightly before finishing.
- Apply primer and topcoats as required to achieve desired finish quality.

B. EXTERNAL SHELTERED CEILING / SOFFIT LINING (H3.1 LOSP Treated IBS V-Groove Ply)

For any exterior ceiling application—such as soffits—you **must use H3.1 LOSP treated IBS V Groove Ply.**

7.7 Approved Mechanical Fixings for Exterior Ceilings

Exterior Grade Nails

- Hot dipped galvanised or Silicon Bronze nails or Annular groove nails or stainless steel nails are required when installing as an exterior ceiling lining, you must also ensure that you use stainless steel in sea spray zones.
- Minimum recommended size: 40–50 mm, depending on batten depth.
  Exterior Grade Screws
- Stainless steel countersunk wood screws for high humidity or coastal areas.

Pilot Drilling & Edge Protection

- Predrill pilot holes when screw fixing to avoid splitting.
- All cut edges MUST be re treated or sealed with an approved timber preservative or LOSP sealer.

Fixing Pattern for Exterior Ceilings

- Edges: Fix at 150 mm centres.
- Intermediate supports: Fix at 300 mm centres.
- Ensure all sheet edges, especially in soffits, are tightly fixed to minimise wind induced vibration.

Ventilation & Moisture Management

- Ensure the soffit area is well ventilated and not exposed to direct rainfall.
- Do not install in environments where prolonged moisture exposure is expected.

Finishing for Exterior Ceilings

- Apply exterior grade paint or coating system compatible with LOSP treated products.
- Maintain coatings as required to ensure long term performance.

8. Ceiling Diaphragm

8.1 Purpose & Compliance

A ceiling diaphragm is a horizontal structural sheet system that ties walls together, so the building acts as one unit during wind and seismic events. Diaphragms are formed in accordance with NZS 3604 Section 13 or be specifically designed to NZS3603.

8.2 Materials

- Sheets: IBS V-Groove Ply 12mm
- Fasteners: Corrosion resistant nails (annular groove) or structural screws per fixing schedule. Avoid reliance on adhesives for structural capacity—adhesives may be used for serviceability but diaphragm strength comes from mechanical fixings.

8.3 Substrate & Moisture

- Ensure ceiling framing/battens/joists are straight, level, and plumb with moisture content ≤ 18 % before sheathing.

8.4 Sheet Layout & Orientation

- Install sheets perpendicular to ceiling joists or in the orientation specified by the designer to align load paths.
- Stagger (brick bond) short edge joints to avoid continuous lines and improve diaphragm continuity.
- Support all edges—provide nogs/blocking so every sheet edge is fully backed.
- Maintain expansion gaps (≈ 2–3 mm) between sheets and at perimeters.

8.5 Perimeter & Boundary Nailing

- Provide continuous perimeter nailing to boundary members (top plates/primary collectors) at the specified schedule (e.g., 150 mm centres on sheet edges).
- At diaphragm boundaries (bracing lines, shear walls), provide additional blocking/strapping as detailed by the designer to ensure direct load transfer.

8.6 Field (Interior) Nailing

- Fix to intermediate framing at ≈ 300 mm centres (or as designed).
- Observe minimum edge distances (e.g., ≥ 7–10 mm from sheet edge) to prevent veneer breakout and ensure capacity.

8.7 Connections to Bracing Lines

- Tie the diaphragm to bracing lines with continuous nailing, straps, or proprietary ties per the engineer/designer's details.
- Ensure collectors/chords (boundary members) are sized and connected to transfer cumulative shear to bracing elements

8.8 Penetrations & Services

- Keep penetrations (downlights, grills, hatches) away from sheet edges and staggered where possible.
- Where required, provide trimming so penetrations do not reduce diaphragm continuity; maintain perimeter nailing around openings.

8.9 Inspection & Documentation

- Verify fixing schedules, perimeter nailing, blocking, and moisture readings before covering.
- Record installation with site photos and as built notes for consent and QA files

9. How to Install IBS V-Groove Ply

9.1 Pre Installation Checks

- Confirm the correct product is being used (Untreated for internal areas; H3.1 LOSP for sheltered exterior soffits).
- Verify sheets are stored flat, dry, and acclimatised to the room for at least 24–48 hours.

- Ensure the building is fully weathertight before installing internal IBS V Groove Ply.
- Inspect all sheets for damage, moisture staining, or warping before installation.
- Check that all tools, fixings, adhesives, and accessories are available and appropriate for the application.
- Ensure framing or battens have a **moisture content ≤18%.**
- Confirm all framing is straight, plumb, and adequately spaced (400–600 mm centres).
- Measure the room and plan sheet layout to minimise visible joins and cut edges.

9.2 Prepare the Substrate

- Ensure all surfaces are dry, level, and free from debris or protrusions.
- Install additional nogs, dwangs or battens to support all sheet edges if required.
- Mark stud/batten lines clearly using a chalk line or laser for accurate fixing.
- Pre plan the alignment of grooves for consistent visual appearance across the installation area.
- Make sure electrical, plumbing, and service penetrations are pre positioned and accessible.

9.3 Cutting the Sheets

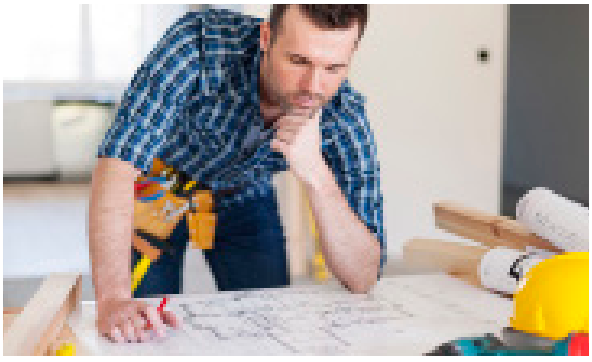
- Use a fine tooth skill saw or circular saw for clean cuts with minimal splintering. Consider using masking tape along the cut line to assist with this.
- Cut with the face side up when using circular saws.
- Lightly sand any rough edges with 120–150 grit sandpaper.
- For H3.1 LOSP treated sheets, seal all cut edges with the appropriate re treatment product.
- Double check measurements before cutting to avoid misalignment of groove patterns.

9.4 Dry Fit the Sheets

- Place sheets temporarily in position to confirm fit and alignment.
- Check groove continuity between adjacent sheets.
- Ensure shadow lines, corners, and joint trims (if used) align correctly.
- Adjust cuts as needed before applying adhesive or installing fixings.

9.5 Apply Adhesive

- Apply high quality panel adhesive in continuous beads along studs or battens.
- Use additional daubs in high movement or ceiling applications.
- Do not allow adhesive to skin—fix sheets promptly after application.
- Avoid excessive adhesive that could create build up or uneven surfaces.



9.6 Fix the Sheets to the Framing

- Position the sheet from one corner and press firmly into the adhesive bed.
- Begin fixing from the centre outwards to prevent bowing or “pillowing.”
- Use the appropriate mechanical fasteners:
  - Internal walls/ceilings: gun driven panel pins, 40 × 2.0 mm nails, or 6g countersunk screws.
  - External sheltered soffits: stainless steel or galvanised annular groove nails.
- Maintain fixing spacing:
  - Edges: 150 mm centres
  - Intermediate studs/battens: 300 mm centres
- Keep fixings 7–10 mm from sheet edges to avoid splitting.
- Predrill 2.4 mm pilot holes when using screws to prevent veneer breakout.
- Drive fixings flush without over driving or damaging the sheet face.

9.7 Joining and Alignment

- Align V grooves carefully so that joint lines remain consistent across the wall or ceiling.
- Maintain expansion gaps (typically 10mm) at perimeters, internal corners, and trim junctions, and 3mm every 6m.
- Check joints regularly during installation to maintain visual uniformity.

9.8 Installing Around Openings

- Mark and cut openings for switches, outlets, vents, and fixtures with accuracy.
- Support cut out areas with additional nogs as needed.
- Use a jigsaw or multi tool for neat cut outs.
- Ensure penetration edges are clean and sealed (especially for H3.1 sheets).

9.9 Final Fixing and Surface Preparation

- Fill nail or screw holes with a flexible, paintable wood filler.
- Sand lightly once filler is cured to ensure a smooth surface.
- Seal or prime the sheet face before painting or staining.
- Follow finish manufacturer instructions for best results.

9.10 Cleanup and Inspection

- Remove dust and debris from all surfaces—including grooves—before finishing.
- Inspect all joints, corners, and fixings for consistency and quality.
- Re tighten or replace fasteners if any have pulled out or are sitting proud.
- Wipe down surfaces to remove oils, fingerprints, or contaminants prior to coating.

9.11 Maintenance & Post Installation Notes

- Maintain coating systems according to manufacturer instructions.
- Avoid exposing untreated IBS V Groove Ply to moisture, condensation, or leaks.
- Inspect periodically in high traffic or high humidity areas.
- Replace damaged sheets promptly to avoid aesthetic or structural issues.

9.12 Take Photos at each step along the way for warranty purposes

- Feel free to send us the finished job photos or post about the products on social media

10. Fixings for Steel Framing

When installing **IBS V-Groove Ply** onto light gauge steel framing, it is essential to use fasteners that are compatible with steel substrates and able to provide adequate pull out resistance. The following requirements apply:

10.1 Minimum Support Requirements

- Steel framing must provide a **minimum 36 mm support face width** to ensure correct fixings and sheet bearing.

10.2 Mechanical Fixings (Required)

Use only **corrosion resistant screws designed for steel framing:**

Approved screw types

- **Self drilling Tek screws**, fine thread, suitable for fastening plywood to thin steel studs.
- **10g × 30–40 mm countersunk self drilling screws** for most internal lining applications.
- For soffits or higher moisture environments, use **stainless steel self drilling screws.**

Fixing considerations

- Screws must penetrate steel framing sufficiently for full thread engagement.
- Oversized screws or coarse thread timber screws are **not suitable** for steel framing.

10.3 Adhesive Use (Recommended)

- Apply a continuous bead of **high quality panel adhesive** along steel battens or studs before positioning sheets.
- Adhesive helps reduce vibration and movement, improving long term performance and finish quality—consistent with IBS V Groove Ply best practice.

10.4 Fixing Pattern

Use the same fixing layout used for timber framing, unless a project specific design requires otherwise:

- **Edges:** 150 mm centres
- **Intermediate supports:** 300 mm centres
- **Minimum edge distance:** 7–10 mm from sheet edges

10.5 Pilot Holes

- Pilot holes are **not normally required** when using Tek type self drilling screws.
- If using non self drilling screws, predrill through IBS V Groove Ply using a **slightly smaller bit.**

10.6 Cut Edge Treatment (H3.1 LOSP Only)

- For treated IBS V Groove Ply used in sheltered exterior areas (e.g., soffits), seal all cut edges and penetrations with LOSP compatible timber sealer.

10.7 Installation Tips for Steel Framing

- Do not overtighten screws; this can strip the steel, reducing pull out capacity.
- Use a clutch controlled drill/driver for consistent torque.
- Ensure sheets are properly supported during installation to avoid flexing or screw breakout.
- Maintain alignment of V grooves between sheets for a consistent finish.

11. Finishing

Finishing IBS V-Groove Ply correctly is essential to achieve a high quality, long lasting decorative surface. The product is supplied fully sanded and is suitable for a variety of finishing methods, including paint, stain, and clear polyurethane. The correct finishing system will depend on the installation location (internal vs. sheltered exterior soffit) and the desired appearance.

1 General Preparation

Before applying any finish:

- Ensure the surface is **clean, dry, and free from dust, dirt, and grease**.
- Wipe the sheet down with a clean cloth to remove factory dust.
- Fill any visible nail, pin, or screw holes with a **flexible wood filler** and allow to dry.
- Lightly sand filled areas and the surrounding surface using **120–150 grit** paper for adhesion.
- For best results, perform a final light sand using **240–320 grit** paper before coating.

2 Painting (Internal Use)

Painting is the most common finishing option for IBS V-Groove Ply and provides a clean, uniform appearance.

Recommended process:

1. **Apply an undercoat/sealer**
   -Use a high quality interior undercoat compatible with timber linings.
   -Ensure the undercoat is worked into the grooves for even coverage.
   -Allow it to dry fully.

2. **Lightly sand after the undercoat**
   -Use fine grit sandpaper (around 220 grit).
   -Remove dust before top coating.

3. **Apply two topcoats**
   -Use a brush or roller suitable for smooth timber surfaces.
   -Sand lightly between coats for a premium finish.

Tips:

- Low sheen paints often give the most even look on grooved finishes.
- Avoid over brushing in the grooves to reduce paint pooling.
- Follow paint manufacturers' drying times closely.

3 Painting (Sheltered Exterior Soffits – H3.1 LOSP Only)

When IBS V-Groove Ply is used as a soffit lining, an exterior paint system is mandatory.

- Use a full exterior grade, three coat paint system (primer + two topcoats) approved for timber substrates.
- All exposed faces and sheet edges must be fully coated.
- Low Light Reflectance Value (LRV) paints may absorb heat and increase the chance of fastener read through, so use lighter, low sheen colours where possible.
- Do not paint when temperatures are below 10°C.

4 Staining

Staining is a popular option when the natural grain and warmth of the timber are to be highlighted.

Staining considerations:

- IBS V Groove Ply has a smooth, fully sanded face suitable for stain application.
- Use a timber stain system recommended for plywood—not all stains give even absorption across veneered faces.
- Apply stain evenly and avoid stopping mid panel to prevent visible lap marks.
- Protective clear coats may be required over stain—follow the stain manufacturer's recommendations.

5 Clear Polyurethane

Clear finishes are ideal where a natural timber appearance is desired.

How to apply:

- Apply two to three coats of a high quality interior polyurethane (water based or solvent borne).
- Lightly sand between coats with 220–320 grit paper for a smooth, even finish.
- Water based polyurethanes maintain the light timber colour; solvent based products tend to amber over time.

Important:

Clear polyurethane finishes are for internal use only—for soffits, a full exterior paint system must be used or a high quality Marine grade polyurethane that must be maintained regularly.

6 Edge and Groove Treatment

- Ensure all grooves are coated evenly—use angled brushes or spray application for best coverage.
- For H3.1 treated sheets, seal all cut edges with LOSP sealer prior to coating.
- For stained or clear finishes, edge absorption may differ; pre sealing edges can help even out final colour.

7 Finishing Best Practice Tips

- Complete all sanding before filling or priming for the most even face finish.
- Mask adjacent surfaces (ceilings, floors, trims) to avoid paint bleed.
- Maintain coating systems according to manufacturer guidance to ensure long term durability.
- For exterior soffits, wash painted surfaces annually to extend coating lifespan.

8 Moisture Exposure and Surface Checking

If the IBS V Groove Ply is exposed to moisture, surface checking (fine cracks or splits) may occur. This is a natural response of the timber and does not affect the structural integrity of the sheet. However, it is advisable to finish or cover the surface promptly to minimise visual imperfections and prevent further moisture ingress.

9 Repairing Bubbling in Plywood

Bubbling can occur when moisture becomes trapped beneath the surface veneer. To repair bubbling before applying any finish:

- Identify the affected area and ensure it is dry.
- Remove the affected area using a router or chisel to remove any bubbled face veneer.
- Fill the area using either a wood filler such as builders bog or a 2 pot epoxy filler
- Allow the filler to cure as per manufacturers instructions.
- Sand the area smooth using 280–320 grit sandpaper.

12. Maintenance

Regular maintenance of **IBS V-Groove Ply** ensures the product continues to perform well and maintains its appearance over time. Although IBS V Groove Ply is a durable decorative plywood lining, it still requires appropriate care depending on where it is installed and how it has been finished.

1 General Care

- Keep the surface clean and free from dust and contaminants by wiping periodically with a soft cloth.
- Avoid excessive moisture exposure—wipe spills or condensation promptly.
- Do not use abrasive cleaners, steel wool, or harsh chemicals, as these may damage the finish.
- Protect the lining from repeated impact, scratching, or gouging by furniture, equipment, or tools.

2 Painted Surfaces

For painted IBS V-Groove Ply:

- Clean using a mild detergent and warm water.
- Do not use abrasive cleaning pads which may scratch the paint film.
- Touch up any damaged or chipped paint as soon as practical to prevent moisture ingress.
- For best long term results, maintain the paint system in accordance with the coating manufacturer's maintenance recommendations.
- Areas with high light exposure or environmental movement may require periodic refinishing to retain an even appearance.

3 Stained or Clear Coated Surfaces

For stained finishes or clear polyurethane:

- Clean with a damp cloth and mild detergent—avoid solvent based cleaners unless approved for timber coatings.
- Reapply clear coats or protective layers periodically, especially in high wear or high UV areas.
- Check seams and grooves for wear; recoat if surface dullness or micro cracking appears.
- Avoid dragging items across the surface to reduce scuffing.
- Check for leaks or gutter overflows that may expose the lining to unexpected moisture and address immediately.

4 Exterior Soffits (H3.1 LOSP Treated Only)

When IBS V-Groove Ply is used in sheltered exterior soffit applications, maintenance is more critical because the product is exposed to temperature changes, humidity, and occasional moisture.

- Maintain the exterior paint system in line with the paint manufacturer's durability schedule.
- Regularly wash soffit linings to remove salt, dust, and grime—minimum once per year.
- Inspect for coating breakdown, especially on edges and grooves; repair any flaking or peeling paint promptly.
- Ensure ventilation around the soffit is unobstructed to prevent moisture accumulation.

5 Post Installation Monitoring

- Inspect fixings periodically to ensure no fasteners have loosened over time due to building movement.
- If swelling, cupping, or moisture marks appear, identify and correct the source of moisture before refinishing.
- Replace any sheets affected by water damage or impact that cannot be repaired satisfactorily.

6 Recoating & Refinishing

- Before recoating, lightly sand the surface to ensure proper adhesion.
- Clean thoroughly to remove dust before applying new paint, stain, or polyurethane.
- Follow coating manufacturer instructions strictly for drying times, application thickness, and environmental conditions.

7 Expected Maintenance Frequency

- Interior areas: Low maintenance—clean as needed; repaint every 5–10 years depending on wear.
- Exterior soffits: Moderate maintenance—wash annually and expect repainting sooner due to environmental exposure.

13. Warranty

13.1 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 EUROFloor (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.

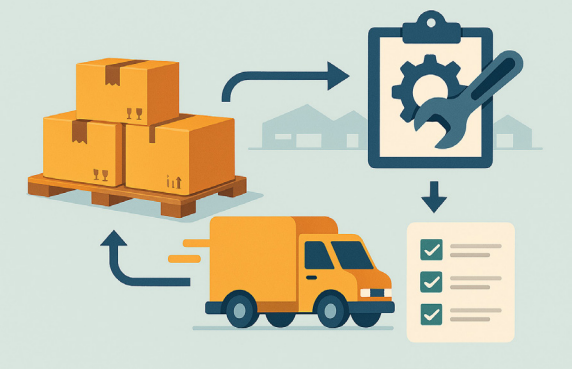
4.8 Normal wear and tear, including non- performance related changes, are excluded from this warranty.

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

(d) 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.

14. TECHNICAL PROPERTIES

IBS V-Groove Ply is manufactured to strict international standards to ensure consistency, durability, and high visual performance. The following technical properties apply to both the untreated (interior) and H3.1 LOSP treated (sheltered exterior soffit) versions.
Manufacturing Standard

- AS/NZS 2269:2012 – Structural Plywood Standard
  IBS V-Groove Ply is manufactured in accordance with AS/NZS 2269, ensuring the product meets structural plywood requirements for strength, stability, moisture resistance, and veneer quality.

1 Bond Type (Glue Line)

- WBP A Bond Phenolic Glue Line
  The veneers are bonded using a Water Boil Proof (WBP) A Bond phenolic resin, designed to withstand moisture exposure without delamination.
- This bond type supports long term stability and makes the H3.1 LOSP treated version suitable for sheltered exterior soffits.

2 Formaldehyde Emission Rating

- Super E0 – Low Formaldehyde Emission
  IBS V-Groove Ply is produced with Super E0 emissions, ensuring a healthier indoor environment with very low VOC release.

This meets modern air quality and green building expectations.

3 Strength Rating

- Manufactured from high quality radiata pine veneers laid up in cross laminated layers, giving the product a strong and stable structure.
- The strength rating is an F8 structural plywood performance under AS/NZS 2269.

4 Glue Line Classification

- A Bond (Phenolic Resin)

The A Bond glue line provides:

- High durability
- Resistance to moisture
- Resistance to temperature changes
- Long term panel stability

- This glue line classification is critical for maintaining veneer adhesion in New Zealand's varied climate conditions.

5 Veneer Face & Back

- Face Veneer:
  - Clean, smooth, visually refined surface S Face
  - Sanded to 150 grit for a uniform appearance
  - Ideal for paint, stain, or clear polyurethane finishes

6 **Back Veneer:**
- Sanded and visually tidy D Face, suitable for concealed or semi con cealed areas
- Provides stable support to prevent panel distortion

7 **Overall Veneer Quality:**
- Produced from 100% Radiata Pine
- Machined V Grooves at 100 mm centres across the face veneer to replicate traditional tongue and groove finishes

Thermal Conductivity

IBS V Groove Ply has an average thermal conductivity of 0.13 W/mK. The following table shows the specific conductivity for each thickness.

Table: Thickness vs THERMAL CONDUCTIVITY	Thickness
Thickness	**Conductivity**
mm	**W/mK**
9	0.112
12	0.138

Fire Tests on Building Materials

IBS V Groove Ply has been tested for ignitablity, flame propagation, heat release and smoke release in accordance to AS/NZS 1530.3:1999.

Tested with clean faced IBS V Groove Ply by AWTA Product Testing, Australia, February 2011.

Table: EARLY FIRE HAZARD PROPERTIES FOR IBS V GROOVE PLY		
Regulatory Indexes	**Result**	**Range**
Ignitability Index	14	0-20
Spread of Flame Index	7	0-10
Heat Envolved Index	5	0-10
Smoke Developed Index	2	0-10

15. Additional Resources

14.1 Compliance and Information

For compliance & information of IBS V-Groove Ply refer to:

- IBS V-Groove Ply Warranty.
- www.ibs.co.nz
- 0800 367 759

14.2 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.

16. Frequently Asked Questions

Frequently Asked Questions (FAQ) – IBS V-Groove Ply

1. What is IBS V-Groove Ply?
IBS V-Groove Ply is a high quality plywood panel with precisely machined V grooves at 100 mm centres, designed to replicate a traditional tongue and groove appearance while providing the strength, stability, and reliability of modern plywood.

2. What applications is IBS V-Groove Ply suitable for?
It is ideal for interior wall linings, ceiling linings, feature walls, partitions, and other decorative interior uses. It can also be used in sheltered exterior soffit applications when treated to H3.1 LOSP.

3. Does IBS V-Groove Ply come treated or untreated?
Yes. It is available in both untreated (for internal use) and H3.1 LOSP treated versions for sheltered exterior environments such as soffits.

4. Can IBS V-Groove Ply be used externally?
Only the H3.1 LOSP treated option may be used externally, and only in sheltered environments such as eaves or soffits. The untreated option is for interior use only.

5. How precise are the grooves?
The V grooves are machined at 100 mm centres, creating a consistent and refined decorative finish.

6. What sanding quality does the panel have?
Panels undergo full 150 grit sanding, giving a smooth, uniform face ideal for painting, staining, or clear finishing.

7. What glue line is used in IBS V-Groove Ply?
It uses a WBP A Bond phenolic glue line, providing excellent moisture resistance and ensuring long term veneer stability.

8. What is the formaldehyde emission rating?
IBS V-Groove Ply meets Super E0 low formaldehyde requirements, making it safe for interior environments with very low VOC emissions.

9. Is IBS V-Groove Ply easy to handle and install?
Yes. The product is lightweight, easy to carry, and suitable for DIYers, handypersons, and professional tradespeople.

10. Can IBS V-Groove Ply be used in Restricted Building Work (RBW)?
Yes — but only where the installation forms part of an RBW element (e.g., ceilings, walls behind bracing). In those cases, installation must be performed or supervised by an LBP.

11. What finishing options are recommended?
IBS V-Groove Ply can be:

- Painted
- Stained
- Clear polyurethane coated

The sanded surface makes it highly finish friendly. (Separate finishing section covers details.)

12. Does the product offer good durability?
Yes — thanks to its cross laminated construction, strong glue line, and optional H3.1 treatment, it provides dependable long term performance for decorative use.

13. What is the face veneer like?
The face veneer is clean, smooth, visually attractive, and designed specifically for decorative applications, providing a premium appearance once finished.

14. What timber is used to manufacture IBS V-Groove Ply?
It is manufactured from 100% high quality Radiata Pine veneers, laid up in multiple cross laminated layers for strength.

15. Can IBS V-Groove Ply be used in high moisture internal rooms like bathrooms?
Not directly. Untreated IBS V Groove Ply must not be used in wet areas. If used in such spaces, it must be protected by compliant materials (e.g., lining systems). The H3.1 version may only be used in sheltered external areas, not internal wet zones.

16. What skill level is needed to install IBS V-Groove Ply?
A competent DIYer, handyperson, or tradesperson can install it. For RBW tasks, an LBP is required.

17. Is IBS V-Groove Ply suitable for high impact areas?
Yes. Compared to MDF or plasterboard linings, plywood offers superior impact resistance.

18. Is IBS V-Groove Ply environmentally friendly?
Yes — the product is manufactured from sustainably produced Radiata Pine and features very low formaldehyde emissions (Super E0).

19. Can IBS V-Groove Ply be used on ceilings?
Absolutely — it is well suited for both internal ceilings and external sheltered soffits (H3.1 LOSP version), and its lightweight construction makes overhead installation easier than many alternatives.

17. LIMITATIONS

The information contained in this document is current as at February 2026 and is based on data available to IBS Sustainable Building Products at the current time.

All photographic images are intended to provide a general impression only and shall not be relied upon as an accurate example of IBS V-Groove Ply products installed in accordance with this document.

IBS reserves the right to change the information contained in this document without prior notice. It is your responsibility to ensure that you have the most up to date information available, including at the time of applying for a building consent.

You can call 0800 367 759 or visit www.ibs.co.nz to obtain current information.

IBS has used all reasonable endeavours to ensure the accuracy and reliability of the information contained in this document.

However, to the maximum extent permitted by law, IBS assumes no responsibility or liability for any inaccuracies, omissions, or errors in this information nor for any actions taken in reliance on this information.

18. Installation Checklist – IBS V-Groove Ply

Use this checklist on site to ensure a smooth, high quality installation of IBS V-Groove Ply. This applies to both untreated (internal) and H3.1 LOSP treated (sheltered exterior soffit) panels.

1. Pre Installation Preparation

- ☐ Confirm correct product type: Untreated for interior, H3.1 LOSP for sheltered exteri or soffits
- ☐ Ensure building is fully weathertight before installing internal IBS V Groove Ply
- ☐ Acclimatise sheets in the installation area for 24–48 hours
- ☐ Check framing moisture content: ≤ 18%
- ☐ Verify all tools, fixings, and adhesives are available and suitable
- ☐ Inspect all sheets for damage, moisture staining, or warping
- ☐ Plan sheet layout (groove alignment, joins, openings)
- ☐ Confirm fixing pattern requirements (edges 150 mm, intermediate 300 mm)

2. Substrate & Framing Checks

- ☐ Framing/battens installed straight, plumb, and level
- ☐ Stud or batten spacing 400–600 mm centres
- ☐ All sheet edges fully supported by framing or trimming
- ☐ Mark studs or battens using a chalk line or laser
- ☐ Ensure service penetrations (electrical/plumbing) are pre located

3. Cutting & Edge Preparation

- ☐ Cut sheets with fine tooth saw or circular saw (face side up)
- ☐ Lightly sand edges with 120–150 grit
- ☐ Seal all H3.1 LOSP cut edges and penetrations with LOSP compatible sealer
- ☐ Dry fit sheets to confirm alignment before adhesive application

4. Adhesive Application

- ☐ Use high quality construction panel adhesive
- ☐ Apply continuous beads along studs/battens
- ☐ Fix sheets to adhesive promptly (don't allow skinning)
- ☐ Avoid excessive adhesive buildup behind sheets

5. Mechanical Fixing

- ☐ Select appropriate fixings:
  - Internal: panel pins, 40 × 2.0 mm nails, or 6g × 30–32 mm screws
  - Exterior soffits: stainless or galvanised annular groove nails
  - Steel framing: self drilling Tek screws
- ☐ Predrill 2.4 mm pilot holes when using screws
- ☐ Install fixings:
  - 150 mm centres on sheet edges
  - 300 mm centres on intermediate framing
- ☐ Keep fixings 7–10 mm from sheet edges

	Installer Details Name of installer: _____ LBP (Licensed Building Practitioner) Number: _____ Date of installation: ____ / ____ / _____ Address of installation: _____

Notes:

Notes:

IBS V-Groove Ply

Design & Installation Guide

IBS
SUSTAINABLE BUILDING PRODUCTS

Scan the QR code to view all IBS V-Groove Ply documents.

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