IBS CD Structural Plywood

Design & Installation Guide

June 2026

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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.

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1. Introduction

This document is intended for designers and installers to ensure that IBS CD Structural Plywood is specified and installed correctly.

1.1 Introduction

Welcome to the design and installation guide for IBS CD Structural Plywood. This guide aims to provide comprehensive advice on handling, installing, and maintaining IBS CD Structural Ply to ensure optimal performance and longevity. It is a versatile and durable material, suitable for various construction applications, including internal linings, bracing elements, and flooring substrates.

This guide is intended for both professional builders and competent DIY enthusiasts. It includes essential information on the required skills, tools, and techniques for successful installation. Additionally, it highlights important documents and standards that must be adhered to, such as the IBS CD Structural Plywood pass™, and warranty.

By following the guidelines outlined in this document, you can ensure that your CD Structural Ply installations meet the highest standards of quality and safety. For further assistance, technical support is available at info@ibs.co.nz.

1.2 Skill Requirement

This guide is intended for Licensed Building Practitioners, qualified and competent trades people and competent DIYers.

All installers must comply with all restricted building work provisions.

To specify IBS CD Structural Plywood, the designer must have the appropriate skills, knowledge of the product and access to all relevant technical information (refer to www.ibs.co.nz).

Where Restricted Building Work (RBW) applies, the designer and/or installer must either be an LBP with the applicable licence or be supervised by an LBP with the applicable licence.

1.3 Scope

IBS CD Structural Plywood may be used as an internal wall or ceiling lining or panelling, wall bracing element, ceiling diaphragm, flooring, or deck or roof substrate.

It may also be used as a general-purpose plywood.

*Refer to the IBS CD Structural Plywood pass™ for the scope and limitations of use when specifying and installing IBS CD Structural Plywood.

*Note: IBS CD Structural Plywood must not be used as external cladding.

Where used as a wall bracing element on a timber framed building:

- Only 7 mm and 12 mm IBS CD structural ply may be used as a bracing element.
- IBS CD Structural ply must be used in accordance with the bracing capacity system information in Table 3.
- Untreated IBS CD structural ply may not be used on the external envelope.

Where used as a flooring, deck, roof substrate and lining

- Untreated IBS CD Structural ply must not be installed in areas with high moisture content, such as kitchens, bathrooms, toilets, laundries, or where used as a roof or deck substrate with a membrane.
- Where used as flooring, or a roof or deck substrate, 18 mm minimum IBS CD Structural Ply must be used. IBS strongly recommends 19mm Structural Plyfloor for flooring, or a roof or deck substrate.

This document is intended for use by Licensed Building Practitioners, qualified and competent tradespeople and competent DIYers, involved in the specification or installation of IBS CD Structural Ply.

1.4 What is IBS CD Structural Plywood

IBS CD Structural Plywood is a high-quality plywood grade designed for structural applications where both strength and appearance are important. It is manufactured to meet the requirements of the Plywood Structural Standard AS/NZS 2269, ensuring both structural integrity and durability.

Here are some key characteristics of CD Structural Plywood:

Grade and Appearance: CD Structural Plywood has a solid face with permissible discolouration, stains, roughness, and chipping. It is finished with 150 grit sanding on the face veneer and 100 grit on the back veneer.

Applications: This plywood is suitable for various construction applications, including internal linings, bracing elements, and flooring substrates.

Identification: The product is often identified with a blue stripe down the middle of the short edges.

IBS CD Structural Plywood is designed to provide both aesthetic appeal and structural performance, making it a versatile choice for builders and DIY enthusiasts alike.

For more information about how plywood is made see the IBS Plywood guide.

1.5 Product Description

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

Treatment: H3.2 CCA treated or untreated

1.6 Sizes & Applications

Table 1: IBS CD Structural Plywood Product Details				
	L x W x Thickness (mm)	**Weight (kg)**	**IBS Product Code**	**GTIN**
IBS CD Structural F8 Untreated Ply	2400 x 1200 x 7	11.5	CDAU072412	9421028761765
	2400 X 1200 X 9	13.6	CDAU092412	9421028761772
	2400 X 1200 X 12	18.6	CDAU122412	9421028761796
	2400 X 1200 X 15	23.3	CDAU152412	09421028761994
	2700 X 1200 X 17	26.8	CDAU172712	09421036230819
	2400 X 1200 X 18	25.8	CDAU182412	9421028761819
	2400 X 1200 X 21	31.1	CDAU212412	9421028761826
	2400 X 1200 X 25	36.6	CDAU252412	9421028769082
IBS CD Structural F8 H3.2 Treated Ply	2400 x 1200 x 7	11.2	CDAT072412	09421028761765
	2400 x 1200 x 9	13.7	CDAT092412	09421028761772
	2400 x 1200 x 12	18.7	CDAT122412	9421028761987
	2700 x 1200 X 12	22.9	CDAT122712	09421028767897
	2400 x 1200 X 15	23.3	CDAT152412	09421028761994
	2700 x 1200 X 17	26.9	CDAT172712	09421036230826
	2400 X 1200 X 18	25.9	CDAT182412	9421028762007
	2400 X 1200 X 21	31.2	CDAT212412	9421028762014
	2400 X 1200 X 25	36.6	CDAT252412	9421028762021

1.7 Supporting Info & Documents

This document must be read in conjunction with the:

- IBS CD Structural Plywood Warranty.
- IBS CD Structural Plywood Pass™ document.

2. Best Practice

2.1 Health & Safety

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

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

For further information on Health & Safety, refer to:

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

2.2 Handling & Storage

Loading and Unloading

IBS CD Structural Plywood is usually supplied on pallets suitable for forklift. If crane offloading by slings is envisaged, special notification must be made in advance or upon placing orders.

All pallets and crates can be safely handled by using a barge lift or hoisting equipment and straps. Steel cables should not be used as it will damage both the pallet and the panels within.

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

All IBS CD Structural Plywood is to be stored flat on pallets and placed inside in covered and dry conditions, optimising protection for stored panels against exposure to weather and other unfavourable conditions.

Before installation please check panels for defects.

Site considerations:

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

2.3 Tools and Equipment

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.

Also a moisture meter and standard carpentry tools.

- Follow good trade practices and the supplier's instructions

2.4 Service Penetration

A small opening, such as a power outlet, measuring 90 x 90mm or less, must be positioned at least 90mm away from the edge of the braced element. Similarly, a waste pipe outlet with a maximum diameter of 150mm must be placed no closer than 150mm to the edge of the braced element.

Only one penetration is allowed per bracing panel.

For smooth, clean cut circular holes:

- Mark the centre of the hole on the 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 use a jig saw or power saw.

3. Durability

3.1 Compliance

The IBS CD Structural plywood is meticulously designed to adhere to the stringent standards set forth in AS/NZS 2269, which encompasses requirements for plywood structural applications. This certification mandates rigorous testing to ensure the material's durability, strength, and performance, particularly in demanding environments. By complying with AS/NZS 2269, the IBS CD Structural plywood guarantees not only superior quality but also reliability for construction projects, ensuring that it meets the high expectations of architects, builders, and regulatory bodies alike.

Furthermore, the certification process involves numerous assessments, including evaluations of the plywood's mechanical properties, bonding quality, and dimensional stability. These comprehensive tests confirm that IBS CD Structural plywood can withstand significant loads and resist environmental factors such as moisture and temperature fluctuations. Consequently, this compliance provides peace of mind to stakeholders, knowing that the plywood used in their projects is both safe and effective, upholding the integrity of the structures they create. By choosing IBS CD Structural plywood, one can be assured of a product that not only meets but exceeds the essential industry standards.

Compliance with Standards

Ensure that the IBS Structural Plywood used meets the relevant building codes and standards. This compliance guarantees that the material performs as expected under specified conditions.

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

IBS Structural Plywood is a versatile and durable building material used in a variety of construction applications. It is renowned for its strength, stability, and resistance to environmental factors, making it a preferred choice for many builders and architects.

However, to maximize its benefits and ensure long-lasting performance, it is essential to understand the specific conditions under which IBS Structural Plywood should be used.

3.4 Prohibited Uses

Specifiers, designers and installers must ensure that any time that IBS CD Structural Plywood is installed that it is only used when all conditions are met in relation to the local requirements as well as E2/AS1 and the current Building Code.

IBS CD Structural Plywood is not to be installed as an external cladding.

3.5 Defects

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

3.6 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.

3.7 Conditions for Use

Structural Applications

IBS CD Structural Plywood is designed and certified for use in structural roles where strength and stability are essential. Typical structural uses include:

- **Floors:** Provides a strong, stable base for various flooring materials.
- **Walls:** Used as sheathing to enhance the rigidity and strength of walls, including as a bracing element in timber-framed buildings (Only 7 mm and 12 mm thicknesses are certified for bracing).
- **Roofing:** Offers a solid base for roofing materials, enhancing the roof's durability.
- **Ceiling diaphragms:** Can be used as a ceiling diaphragm in accordance with NZS 3604:2011 or AS/NZS 1170.
- **Deck substrates:** When used as a deck or roof substrate, H3.2 treated IBS CD Structural Ply must be used, and installation must comply with E2/AS1 and membrane supplier requirements.

For all structural applications:

- Ensure compliance with relevant building codes.
- Use the correct thickness for the intended load and application (e.g., minimum 18 mm for flooring).
- Protect from prolonged exposure to moisture; seal all cut edges and ensure proper waterproofing.
- Install only on framing with moisture content below 18%.
- Use appropriate fasteners and installation methods as detailed in the guide.

IBS CD Structural Plywood is also suitable for a range of general building tasks, such as:

- Internal wall and ceiling linings or panelling.
- Concrete framework to F3 Standard NZS 3114-1987.
- Soffit linings, box beams, signage, furniture, industrial applications, mobile homes, and boat fittings.
- General-purpose plywood for non-structural uses.
- For general building work:
- Store panels flat, dry, and protected from weather.
- Inspect for defects before installation.
- Allow for expansion gaps between sheets and at perimeters.
- Fill all visible screw or nail holes with a flexible grade wood filler and lightly sand as needed.
- Follow all health and safety protocols during handling and installation.

Where IBS CD Structural Plywood Should Not Be Used

- **External Cladding:** IBS CD Structural Plywood must not be used as external cladding under any circumstances.
- **Untreated Ply in Moisture-Prone Areas**: Untreated IBS CD Structural Ply must not be installed on the external envelope or in areas with high moisture content, such as bathrooms, kitchens, toilets, laundries, or as a roof or deck substrate with a membrane. Always use H3.2 Treated ply in these areas.
- **Environments with Timber Framing Moisture Content >18%:** Do not install if the supporting timber framing exceeds 18% moisture content.
- **Applications Outside the Scope of the Pass™ or Installation Guide:** Any use outside the specified scope or without following the design and installation guidelines will void the warranty and may result in failure.
- **Improperly Sealed or Waterproofed Installations:** Avoid use in environments where proper sealing and waterproofing cannot be ensured, as moisture ingress can cause swelling, warping, and structural failure.

4. Design

Specify IBS CD Structural Ply for use as an internal wall or ceiling lining or paneling, wall bracing element, ceiling diaphragm, flooring, or deck or roof substrate taking account of the following design requirements.

4.1 External Wall Bracing - Scope of Use

IBS supply IBS CD Structural Plywood for use as an internal or external wall bracing element when used in conjunction with a specific fixing system.

IBS CD Structural Plywood may be used as a bracing element within the following scope:

In wind zones:

- Up to and including extra high.
- Up to 2.5kPa ULS where the building is specifically engineered.

Building scope:

- New buildings: with timber wall framing complying with NZBC.
- In conjunction with the GIB HandiBrac® method or a Strap Bracing system.
- In conjunction with LVL System - staples, Mitek CPC 80 and SPAX screws.
- In conjunction with LVL System - staples, Simpson Strong-Tie DTT2Z and type 17 screws.
- In conjunction with concrete and timber subfloor applications that comply with the NZBC.
- With all cladding types that comply with NZBC.
- In conjunction with a drained and ventilated nominal 20mm cavity system.
- With aluminium joinery complying with the NZBC.
- IBS CD Structural Plywood may be used as a bracing element in existing buildings, however in these cases IBS makes no claim as to the bracing value that will be achieved.

If IBS CD Structural Plywood is to be installed as a bracing element in existing timber framed buildings, the following scope applies:

- Existing timber framed buildings where the designer and/or installer have assured themselves that the existing building is suitable for the intended building work.
- Existing concrete and timber sub-floor structures where the designer and/or installer have assured themselves that the existing building is suitable for the intended building work.

4.2 Limitations

- Allow a minimum of 4 mm between panels, 2mm around each sheet both vertically and horizontally to accommodate dimension movement.
- Maximum spacings of wall studs must not exceed 600 mm centres.

IBS CD Structural Plywood, though versatile and strong, has limitations that must be considered.

- When using IBS CD Structural Plywood, it is crucial to consider its sensitivity to moisture. Unless properly sealed and waterproofed, this plywood can absorb moisture, leading to swelling, warping, and potential structural failure.
- IBS CD Structural Plywood should not be installed in environments where the moisture content of the supporting timber framing exceeds 18%.
- To mitigate these risks, it is essential to ensure proper sealing and waterproofing measures are in place.
- Another limitation to consider is the structural capacity of IBS CD Structural Plywood. While it is a strong and versatile material, you must ensure that you have used the correct thickness for the correct application.
- Environmental factors such as temperature fluctuations and UV exposure can also impact the durability of the plywood. Therefore, it is important to ensure that the plywood is used within its structural limits and that appropriate protective measures are taken to enhance its longevity in various environmental conditions.
- Sustainability is also a concern, with issues like deforestation and carbon footprint arising from raw material sourcing and production. Choosing plywood certified by sustainable forestry programs and opting for locally sourced materials can help mitigate these impacts.

4.3 IBS CD Structural Plywood Wall Bracing System

Table 2 provides the bracing value for IBS CD Structural Plywood with different systems on Timber frames.

NOTE:

- For all bracing systems, no product substitution is allowed. Installation must be in accordance with these instructions (unless authorised by IBS). If these requirements are not met, IBS provides no assurance that the bracing capacity claimed in this design and installation guide will be achieved.
- The allowable racking resistances for IBS CD Structural Plywood systems are applicable to frames lined with IBS CD Structural Plywood on one side only, unless specified in Table 2.
- Panels must always be installed vertically if used as bracing sheet.
- Sheets can be installed horizontally if not used as a bracing element.
- Stud sizes and centres will vary depending on height load and loads ref: NZS3604:2011.

The systems may be used on walls of lengths different to those in Table 2 but is limited to:

- Wall lengths no greater than twice the tested system length.
- For walls greater than the tested system length multiply the length of the wall on a pro-rata basis, up to double the length of the system.
- A wall height less than 1.5 metres shall be referred to a specific engineer design.
- A wall height less than 2.4 metres shall be rated as if they are 2.4 metres high.
- Panels higher than IBS CD Structural Plywood 2400 mm must be fixed top plate to bottom plate. If you are after longer sheets consider using IBS RigidRAP® or IBS RigidRAP® - XT which has sheets sizes of 2440, 2745 or 3050mm.
- A part sheet can be used but must be nogged and nailed.
- Minimum sheet width is 400mm.

4.4 Bracing on Timber and Concrete floors

It should be noted that in NZS3604:2011, the bracing resistance of elements on concrete flooring is 150 BU/m and to 120 BU/m on timber floors.

4.5 Framing Centres

Framing to support the IBS CD Structural Ply sheets must be supported by timber framing with spacings at:

Table 2: Framing centres for wall and ceiling linings			
Wall Lining		**Ceiling Lining**	
Stud Centres (mm)	**Nog or dwang Centres (mm)**	**Joist/truss centres (mm)**	**Nog or dwang centres (mm)**
400	1200	450	800
450	1200	600	600
600	800	900	480
		1200	480

Load-Bearing Requirements

When used in load-bearing applications, it is crucial to consider the specific load requirements. IBS Structural Plywood can support substantial weights, but the thickness and grade must align with the project's load specifications. Consulting with a structural engineer can ensure the plywood meets the necessary standards.

Installation Practices

Proper installation is vital for the optimal performance of IBS Structural Plywood.

Key practices include:

- **Sealing:** Edges should be sealed to prevent moisture ingress.
- **Fastening:** Use appropriate fasteners and spacing to ensure stability and strength.
- **Ventilation:** In enclosed spaces, ensure adequate ventilation to prevent moisture buildup.

4.6 Fixing Details

All Uses

- Use only Hot-dipped galvanised, stainless steel, or silicon bronze fasteners when using H3.2 CCA-treated CD Ply.
- Fixings must comply with NZS 3604:2011, Section 4.
- Embedment depth should not exceed one veneer.

Internal Wall Lining

Nails:

- 40 x 2.0 mm jolt head nails with panel adhesive

Finishing Nails / Pins:

- Mechanical gun-driven pins with panel adhesive (recommended for a cleaner finish)

Screws:

- 6 g x 32 mm countersunk, coarse thread woodscrews
- **Adhesive:** Use panel adhesive compatible with the treatment class

Installation Notes:

- Sheets can be fixed horizontally or vertically
- Leave a 5 mm gap at wall ends and 3 mm expansion joints every 6 metres

Support spacing:

- Studs at 400–600 mm centres; nogs at 800–1200 mm depending on stud spacing

Internal Ceiling Lining

- **Fixings:**

  Same as internal wall lining (nails, screws, or finishing nails with adhesive)

- **Adhesive:**

  Use construction grade panel adhesive

Support Spacing:

- Joint/truss centres: 450–900 mm
- Nogging centres: 480–800 mm depending on truss spacing

Flooring (Internal)

Nails:

- 60 x 2.8 mm flat head nails (annular groove for stainless steel) with panel adhesive

Finishing Nails:

- 65 x 2.87 mm ring shank mechanical gun nails (set depth to one veneer)

Screws:

- 10 g x 45 mm countersunk, coarse thread woodscrews
- Use stainless steel screws in wet areas

Adhesive:

- Panel adhesive required for all fixing types

Installation Notes:

- Minimum thickness: 18 mm
- Lay perpendicular to joists in a staggered pattern
- Allow 2–3 mm expansion gap between sheets
- Fixings at 150 mm centres around perimeter, 300 mm through body
- All edges must be supported

Flooring (External / Wet Areas)

Same as internal flooring, with emphasis on:

- *H3.2 CCA Treated CD Structural Ply only
- Use of stainless steel screws
- Ensure flush or countersunk fixings
- Check moisture content before membrane installation
- Chamfer sheet edges (minimum 5 mm)
- Maximum joist spacing: 400 mm
- Comply with membrane supplier’s requirements

Roof and Deck Substrate

Nails:

- 60 x 2.8 mm flat head nails (annular groove for stainless steel) with panel adhesive
- 65 x 2.87 mm ring shank mechanical gun nails (set countersink depth to one veneer)

Screws:

- 8 g x 40 mm countersunk, coarse thread woodscrews (stainless steel)

Adhesive:

- Construction grade panel adhesive required

Installation Notes:

- Lay perpendicular to joists in staggered pattern
- Support all sheet ends
- 2–3 mm expansion gap between sheets
- Fixings must be flush or countersunk
- Sheet edges must be chamfered (5 mm minimum)
- Ensure flat surface and correct moisture content before membrane installation

Ceiling Diaphragm

Fixings:

- 140 mm x 35 mm top capping fixed on top of plate (perimeter fastening)

Adhesive:

- Construction grade panel adhesive required

Double-Sided Tape:

- Use in conjunction with adhesive to assist with sheet placement

Installation Notes:

- Must comply with NZS 3604 Section 13 or be specifically designed to NZS 3603
- Diaphragm must cover entire ceiling area and be continuous
- Sheet layout must not exceed twice the width between braced walls

4.7 IBS CD Structural Plywood Bracing Capacity (Timber Frames)

Calculate bracing units in accordance with the Table 3: Bracing Table and NZS 3604:2011 and specify hold-down method and fixing requirements.

*Note BU/m value as limited by the ultimate load capacity.

Table 3: The following table provides the bracing value for the different systems

Table 3	Concrete Slab		Timber Floor	
	Wind	EQ	Wind	EQ
System 1: IBSCDS01 **IBS CD Structural Plywood - 12mm** Ply - 1200 mm x 2400 mm wall with M10 Hold Down Bolts 50 mm x 50 mm washers, 25 x 0.9 mm bottom plate straps **Fixing** - 60 x 2.5 mm annular grooved nails	123 BU/m	132 BU/m	123 BU/m	132 BU/m
System 2: IBSCDS02 **IBS CD Structural Plywood - 7mm** Ply - 1200 mm x 2400 mm wall with M10 Hold Down Bolts 50 mm x 50 mm washers, 25 x 0.9 mm bottom plate straps **Fixing** - 30 x 2.5 mm annular grooved nails	130 BU/m	132 BU/m	130 BU/m	132 BU/m
System 3: IBSCDS03 **IBS CD Structural Plywood - 7mm** Ply - 1200 mm x 2400 mm wall with M10 hold down bolts to GIB Handibrac® bottom plate brackets **Fixing** - 40 x 2.5 mm stainless steel nails	94 BU/m	95 BU/m	94 BU/m	95 BU/m
System 4: IBSCDS04 **IBS CD Structural Plywood - 7mm** Ply - 600 mm x 2400 mm wall with M10 hold down bolts to GIB Handibrac® bottom plate brackets **Fixing** - 40 x 2.5 mm stainless steel nails	68 BU/m	47 BU/m	68 BU/m	47 BU/m
System 5: IBSCDS05 **IBS CD Structural Plywood - 7mm** Ply - 400 mm x 2400 mm wall with M10 hold down bolts to GIB Handibrac® bottom plate bracketss **Fixing** - 40 x 2.5 mm stainless steel nails	61 BU/m	72 BU/m	61 BU/m	72 BU/m

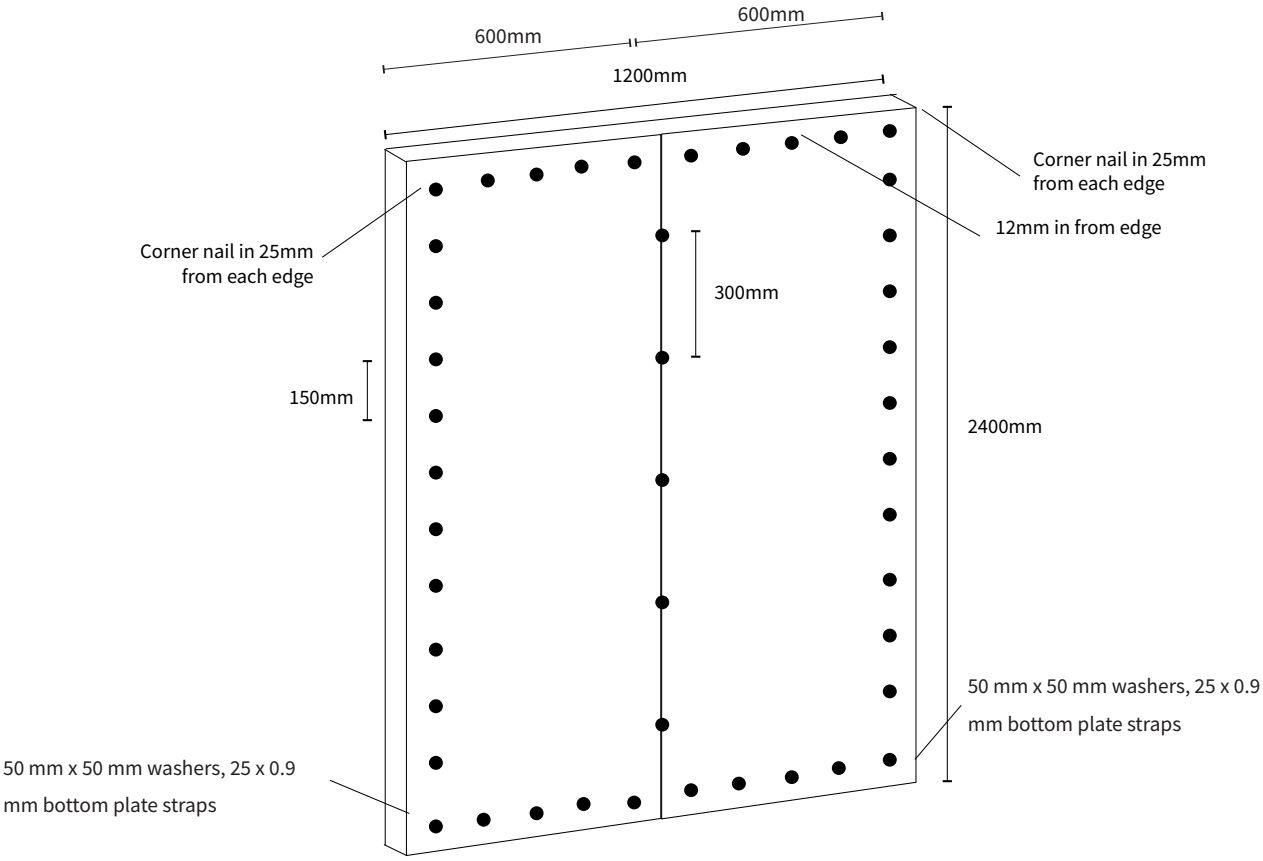
SYSTEM 1 - IBSCDS01

IBS CD Structural Plywood (12 mm) 1200 x 2400 mm wall using 50 mm x 50 mm washers, 25 x 0.9 mm bottom plate straps

Wall construction:

- 90 x 45 MSG8 studs.
- IBS CD Structural Plywood 12mm panel one side.
- 60 x 2.5 mm annular grooved nails at 150 mm centres around perimeter and 300 mm on the middle studs.
- 50 mm x 50 mm washers, 25 x 0.9 mm bottom plate straps
- M10 hold down bolts are recommended for use on concrete floors.

Figure 1



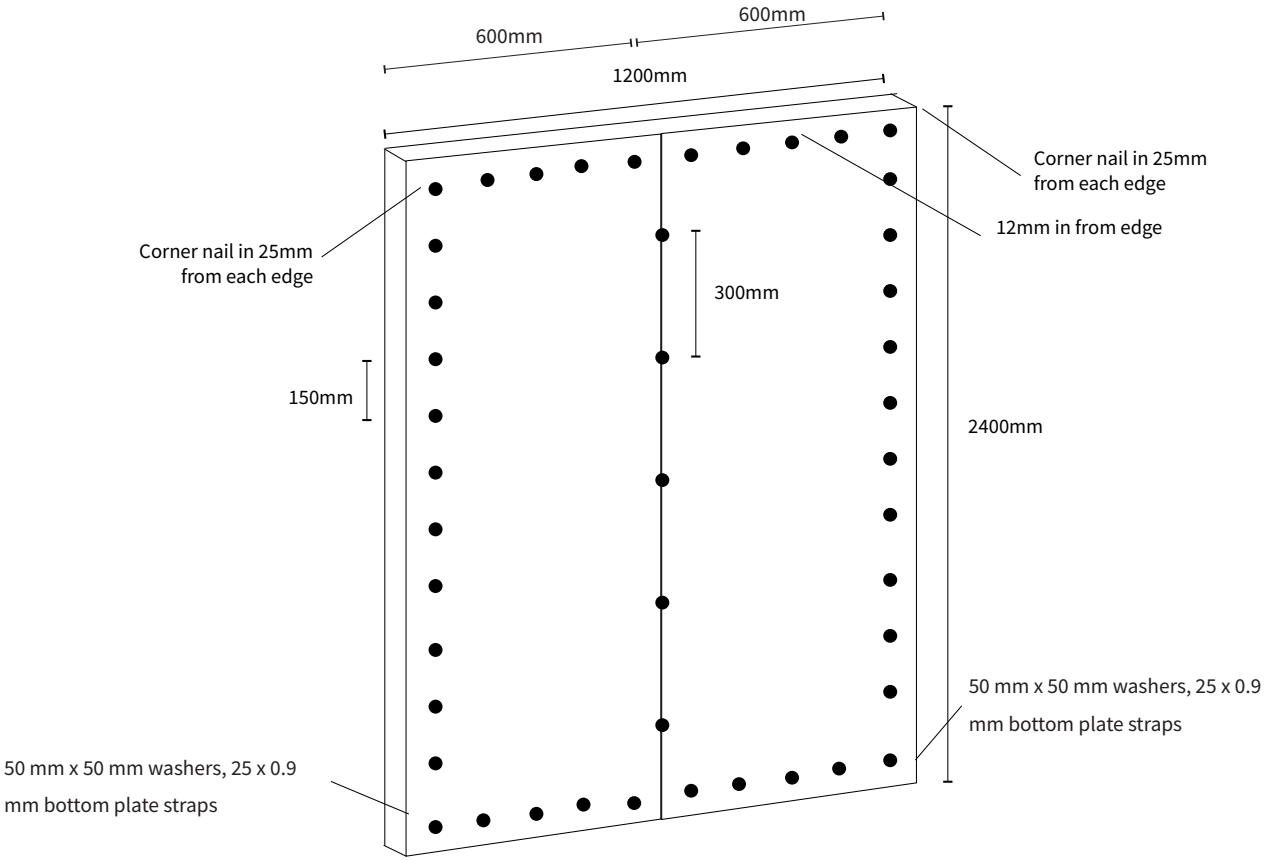
SYSTEM 2 - IBSCDS02

IBS CD Structural Plywood (7 mm) 1200 x 2400 mm wall using 50 mm x 50 mm washers, 25 x 0.9 mm bottom plate straps

Wall construction:

- 90 x 45 MSG8 studs.
- IBS CD Structural Plywood 7mm panel one side.
- 30 x 2.5 mm annular grooved nails at 150 mm centres around perimeter and 300 mm on the middle studs.
- 50 mm x 50 mm washers, 25 x 0.9 mm bottom plate straps
- M10 hold down bolts are recommended for use on concrete floors.

Figure 2



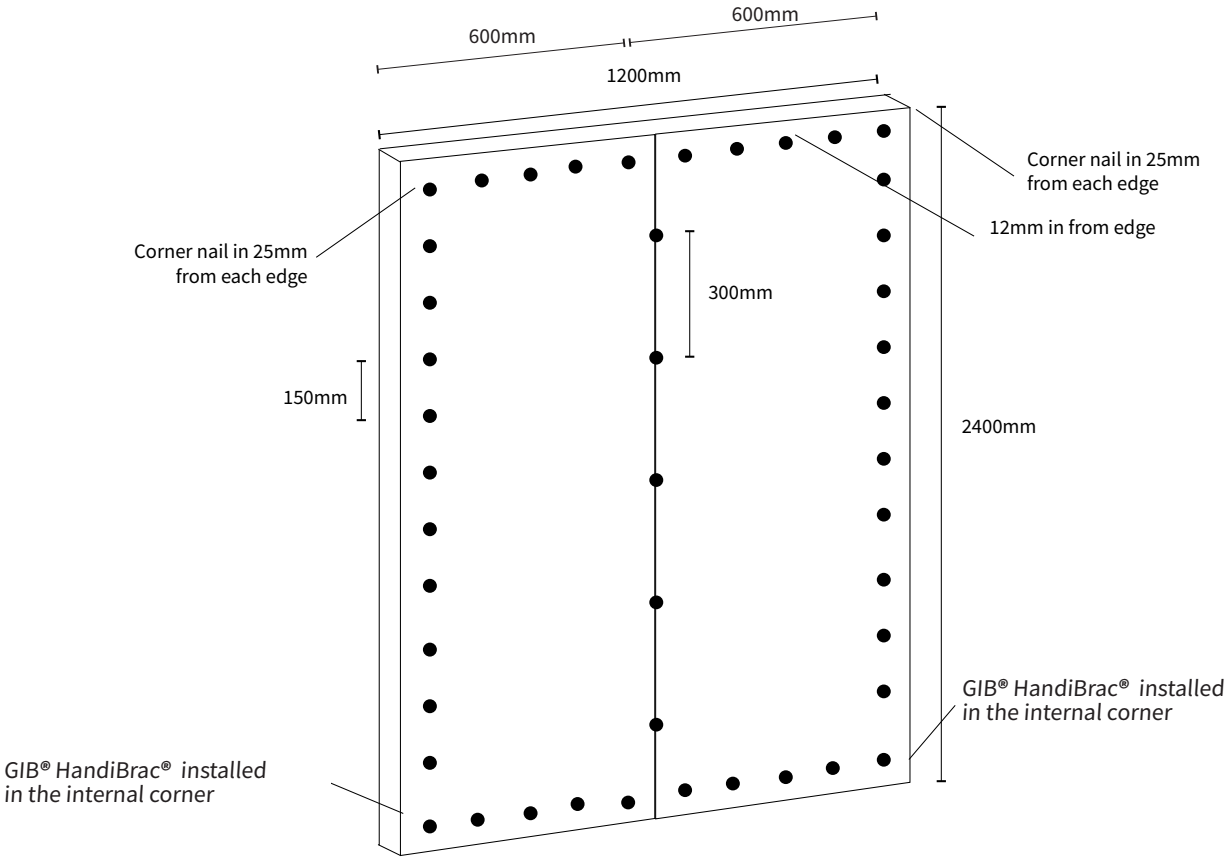
SYSTEM 3 - IBSCDS03

IBS CD Structural Plywood (7 mm) 1200 x 2400 mm wall using GIB® HANDIBRAC®

Wall construction:

- 90 x 45 MSG8 studs.
- IBS CD Structural Plywood 7 mm panel one side.
- 40 x 2.5 mm stainless steel nails at 150 mm centres around perimeter and 300 mm on the middle studs.
- GIB® HandiBrac® hold down brackets fixed to each end-to-end studs and to bottom plate with concrete hold downs as per manufacturer's specifications.
- M10 hold down bolts are recommended for use on concrete floors.

Figure 3



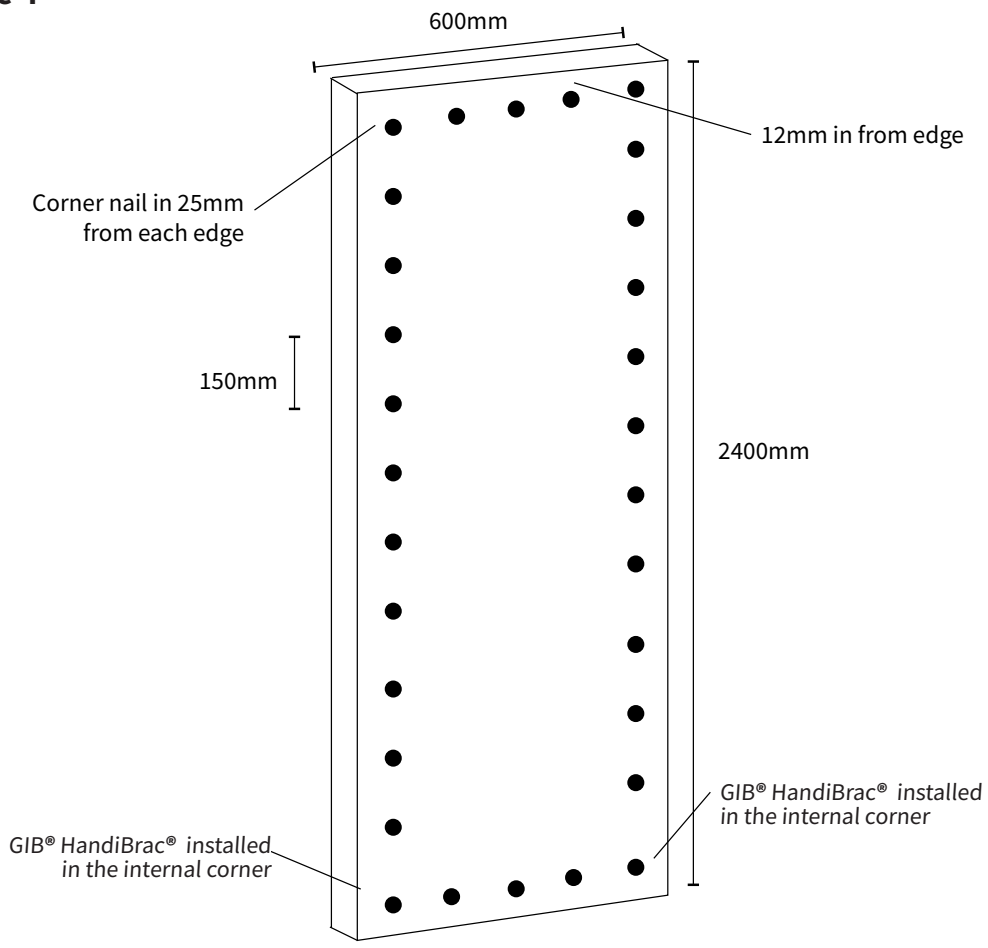
SYSTEM 4 - IBSCDS04

IBS CD Structural Plywood (7mm) 600 x 2400 mm wall using GIB® HANDIBRAC®

Wall construction:

- 90 x 45 MSG8 studs.
- IBS CD Structural Plywood 7mm panel one side.
- 40 x 2.5 mm stainless steel nails at 150 mm centres around perimeter and 300 mm on the middle studs.
- GIB® HandiBrac® hold down brackets fixed to each end-to-end studs and to bottom plate with concrete hold downs as per manufacturer's specifications.
- M10 hold down bolts are recommended for use on concrete floors.

Figure 4



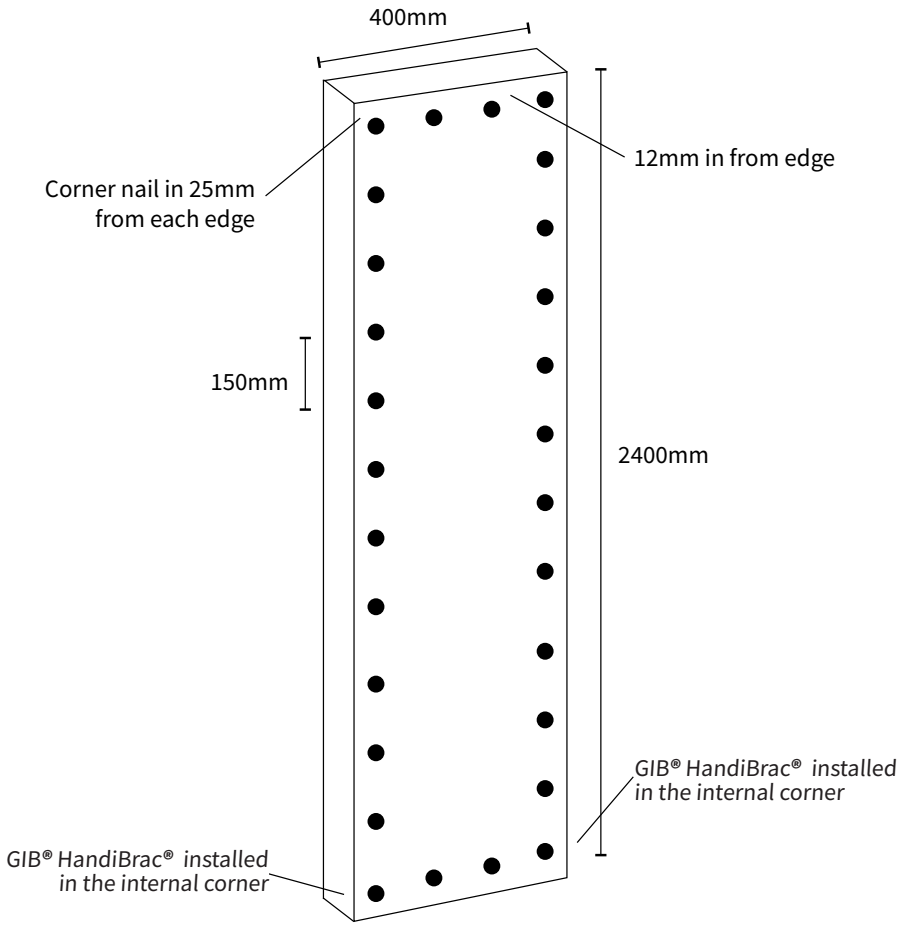
SYSTEM 5 - IBSCDS05

IBS CD Structural Plywood (7 mm) 400 x 2400 mm wall using GIB® HANDIBRAC®

Wall construction:

- 90 x 45 MSG8 studs.
- IBS CD Structural Plywood 7 mm panel one side.
- 40 x 2.5 mm stainless steel nails at 150 mm centres around perimeter and 300 mm on the middle studs.
- GIB® HandiBrac® hold down brackets fixed to each end-to-end studs and to bottom plate with concrete hold downs as per manufacturer's specifications.
- M10 hold down bolts are recommended for use on concrete floors.

Figure 5

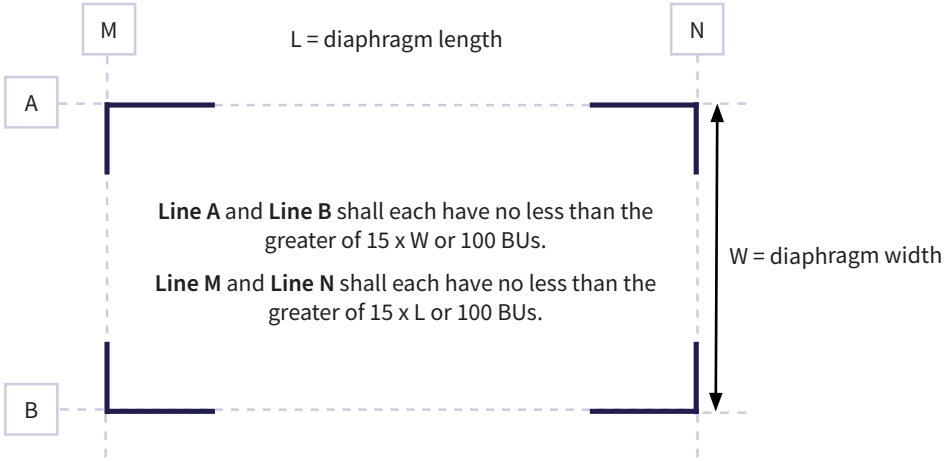


4.8 Design Ceiling Diaphragm

Specify ceiling diaphragms in accordance with NZS 3604:2011 (refer to section 13 and paragraph 5.6) or specifically design the ceiling diaphragm in accordance with AS/NZS 1170.

For ceilings of large rooms, where bracing lines exceed 5.0 m, a ceiling diaphragm can be installed, provided no less than 100 bracing units exist in each wall. The length of the diaphragm must not exceed twice the width measurement between braced walls and must be IBS CD Structural Ply over the entire area specified as a diaphragm.

Specify fixings as 140 mm x 35 mm top capping fixed on top of plate to the perimeter.



4.9 Design Flooring

Design floor framing in accordance with NZS 3604:2011 (refer to section 7) or specifically designed to AS/NZS 1170 taking account of the floor loading of 1.5 kPa, 2.0 kPa and 3.0 kPa as described in NZS 3604:2011, (refer to section 1). Maximum joist spacings are 400 mm centres for 18 mm thick IBS CD Structural Ply and a 2 kPa floor load. Other thicknesses and floor loadings are subject to specific design.

IBS CD Structural Ply can be used as a structural floor diaphragm when specified in accordance with NZS 3604:2011 (section 7). Ensure there is adequate wall bracing units and all requirements are meet as specified in section 7.3 of NZS 3604:2011.

4.10 Design Deck or Roof Substrate

Specify IBS CD Structural Plywood in accordance with E2/AS1. Membrane roofs and decks covered by E2/AS1 include:

- Roof with a minimum fall of 2.0 degrees (1:30)
- Decks with a minimum fall of 1.5 degrees (1:40)
- Decks with a maximum area of 40 m2
- Internal gutters with a minimum fall of 1 to 100 and with no cross seams
- Decks with removable raised surfaces to give level access.

All fixings (materials and spacings) must be in accordance with E2/AS1 and NZS 3604:2011. The slope must be designed in accordance with E2/AS1.

5. Installation

Below is the recommended installation process for IBS CD Structural Plywood, please make sure you follow the below steps in order.

5.1 Installing CD Structural Plywood

Access and view building consent documentation, if applicable.

For all applications of IBS CD Structural Ply:

- Ensure the proposed use is within the scope and limitations of the pass™. IBS CD Structural Ply must not be used as external cladding.
- Untreated IBS CD Structural Ply must not be used on the external envelope or in areas with high moisture content such as bathrooms.
- Inspect panels for visual defects prior to installation. Responsibility lies with the installer to ensure individual sheets meet the aesthetic requirements of the project. IBS will not be responsible for installation or removal costs where aesthetically unacceptable panels have been installed.
- Ensure the moisture content of the timber framing is not higher than 18 % moisture content. Ensure IBS CD Structural Ply sheets are below 18% moisture content before installing moisture sensitive materials such as membrane, coverings or coatings.
- If the LPB does not have a moisture meter, consider asking the Council inspector to confirm the plywood is less than 18 % prior to the installation of the membrane.
- Confirm the structural frame is in accordance with this installation guide with adequate support to sheet edges and end seating.
- Confirm that the framing and substrate are straight and true and within the specified tolerances outlined in Section 2 of NZS 3604:2011 Timber-framed buildings or Nash Standard Part 2: 2009 Light Steel Framed Buildings. A thermal break must be used on external envelope walls. IBS RigidRAP® -XT is recommended in this instance.
- Cut sheets using a fine-tooth hand or power skill saw. Arrise the edge using a plane or 120-150 grit sandpaper. Cut edges of the treated ply must be sealed with Concentrated Timber Preservative (e.g. Metalex).
- Where sheets are to be fixed with screws, predrill 2.4 mm pilot holes to prevent splitting the sheets. Drill the holes approximately 2-3 mm deeper than the screw depth.
- Ensure screws are not overtightened as it will reduce their holding strength.
- Where a high visual finish is desired, protect IBS CD Structural Ply from exterior moisture during construction with weatherproof covers and/or temporary roofing.

5.2 Wall & Ceiling Installation

For installation of IBS CD Structural Ply as a wall or ceiling lining:

Fix with:

- 40 x 2.0 mm jolt head nails with panel adhesive
- Mechanical gun-driven pins with panel adhesive (recommended)
- 6 g x 32 mm, countersunk, coarse thread woodscrews.
- Fixings should be at 150mm centres at sheet edges and 300mm centres on intermediate supports. Where back nailing over rafters galvanised flat head nails can be used.
- Fixings should be minimum 12 mm from sheet edges.
- A continuous 5 mm bead of adhesive construction glue can be used to the full perimeter of the sheet and to all intermediate joists and additional blocking. Ensure that the selected adhesive is compatible with the plywood treatment.
- Sheets must be supported at all edges and therefore may require additional blocking.
- Allow 2–3 mm expansion gap between sheets and 5 mm expansion gaps at the perimeter of the floor and ceilings.
- Fill all visible screw or nail holes with a flexible grade wood filler and then lightly sand.

5.3 Ceiling Diaphragm Installation

For installation of IBS CD Structural Ply as a ceiling diaphragm:

- Install in accordance with IBS CD Structural Ply wall or ceiling lining installation and design instructions, and fix with 140 mm x 35 mm top capping fixed on top of plate to the perimeter.

5.4 Bracing Wall Installation

For installation of IBS CD Structural Ply as wall bracing:

- 7 mm or 12 mm thick IBS CD Structural Ply must be used.
- Fix using the specified sheet fixings in accordance with Table 2 at 150 mm centres around the perimeter of each panel and 300 mm centres on the middle studs.
- Following the correct Diagram system as per bracing requirements
- Sheets must be fixed vertically.
- Fixings should be minimum 7 mm from sheet edges for square edge panels. Ensure nails and screws are fixed at the centre point of the studs. There is no need for nails or screws on nogs or dwangs. Use hot dipped galvanised fasteners or corrosion resistant fasteners (i.e. stainless steel) determined by design for specific hazards. Where using stainless steel or galvanised nails, nails must be annular grooved. Do not overdrive power driven nails.
- Ensure nails and screws are fixed at the centre point of the studs.
- Install appropriate hold downs such as Gib Handibrac on each corner of the bracing element.
- Fill all visible screw or nail holes with a flexible grade wood filler and then lightly sand.

5.5 Flooring Installation

For installation of IBS CD Structural Ply as flooring:

- 18 mm IBS CD Structural Ply must be used at a minimum.
- For sub-floor installations, ensure ground clearances are minimum 550 mm from the underside of the joist.
- Where the possibly of moisture exists in sub-floor situations, install a DPC to prevent rising damp.
- Subfloor spaces must have adequate ventilation, provided at a rate of at least 3,500 mm2 of open vent area for every square metre of floor.

- IBS CD Structural Ply may be installed as a fitted floor or a platform floor. Fitted floors are those installed after internal walls are constructed. Platform floors are installed prior to the construction of internal walls. For fitted floors, an expansion gap of 5mm must be left around all walls. This gap will later be covered by linings and skirting boards.
- Ensure all plywood edges are supported.
- Seal all cut edges of boards by applying a compatible bead of adhesive prior to installing. The adhesive bead must not be allowed to dry and become hard on the surface.
- String lines should be used to ensure the first run of flooring is straight and true.
- Once the first board is positioned accurately on the joist with adhesive in place and fastened to prevent movement, the next board should be placed into position, glued, and fixed.
- Allow expansion joints of 10 mm to 20 mm wide for a continuous run of 10 m to 15 m.
- Where installing on joists, sheets must be installed perpendicular to the run of joists. Lay sheets in a staggered brick bond pattern. Sheets should be continuous over three joists (two spans) except at floor edges where infill sheets may be required. Sheets must be supported at all edges and therefore may require additional blocking.
- All jointed sheets must allow a 2 – 3 mm expansion gap and a 5 mm expansion gap at the perimeter of the floor.
- Sheets must be glued using a suitable construction adhesive. A continuous 5 mm thick bead of adhesive must be used to the full perimeter of the sheet and to all intermediate joists and additional blocking. Ensure that the selected adhesive is compatible with the plywood treatment.
- Fixings must be in accordance with the minimum requirements of section 10 of AS/NZS1860.2 or in accordance with Table 2.2 of NZS 3604:2011 as follows in section 5.6.
- For sheet vinyl or laminate flooring, install a flexible underlay or sheet underlay such as IBS Hardboard Underlay as required by the vinyl manufacturer's technical data. It is also recommended to install IBS Hardboard Underlay when laying a carpet finish.

5.6 Fixing Requirements – Timber and Steel

Timber

- Minimum 65 mm x 2.8 mm hot-dipped galvanised annular grooved flooring gun nails for 18 mm and 21 mm board and 75mm x 2.8mm hot-dipped galvanised annular grooved flooring gun nails for 25 mm board.
- Minimum of 60 x 2.8mm hot-dipped galvanised jolt head nails or 60 x 3.15mm hot-dipped galvanised CSK annular grooved flooring nails if hand fixing.
- 50mm x 10g countersunk, self-drilling wood screws for 18mm and 21mm board and 65mm x 10g countersunk, self-drilling wood screws for 25mm board.
- Nails may be applied by hand or with a nailing gun. Care should be taken to adjust gun nailing for softwood or hardwood joists, so that nails do not penetrate the surface by more than 1 mm. Do not allow nails to pull the board to the top of the joists. Ensure that the underside of the sheet is in firm contact with the joist before firing the nail.
- Angle nails towards the centre of the joists to maximise secure fastening into the timber.
- Fill all visible screw or nail holes with a flexible grade wood filler and then lightly sand.

Steel

- Extended point self-tapping screws No. 45mm x 10g CSK.
- Do not use jolt or bullet head nails.
- For fixing to I-Beam joists, use screws only and not nails.
- Fixings should be spaced at 150 mm centres along sheet edges and at 300 mm centres over the rest of the sheet.
- Fixings should be 12 mm minimum from sheet edges
- Fixings must not penetrate the surface by more than 1 mm.

5.7 Timber and Steel Fixing

Fixings must be:

- **For timber:** 50 mm × 10 g countersunk, self-drilling wood screws
- **For steel:** Extended point self-tapping screws, 45 mm × 10 g CSK

Notes:

- Do not use jolt or bullet-head nails.
- When fixing to I-Beam joists, use screws only — nails are not suitable.
- Fixings should be spaced at 150 mm centres along sheet edges and 300 mm centres over the rest of the sheet, with a minimum distance of 12 mm from sheet edges.
- All fastener heads must be recessed below the level of the sheet face.
- Chamfer all leading plywood edges with a 10 mm radius corner.
- Install a minimum 20 × 20 H3.2 treated timber fillet in internal corners.
- Rebate sheets where metal edge trims are detailed.
- Fill or level all holes, cracks, and imperfections with a compatible filler to prevent visibility through the membrane.

5.8 Decking or Roofing Substrate Installation

For installation of IBS CD Structural Ply as a deck or roof substrate:

- H3.2 treated IBS CD Structural Ply must be used.
- Ensure the deck is designed in accordance with E2/AS1.
- Ensure the selected membrane system is compatible with H3.2 treated plywood.
- Substrate framing must support the plywood at a maximum 400 mm centres each way for roofs and 400 mm each way for trafficable decks. Allow a perimeter expansion or movement gap of 5 mm where sheets are fitted within a confined area such as a roof surrounded by parapet.
- The substrate must be sufficiently ventilated. Closed-in construction spaces under membrane roofs and decks shall have adequate ventilation to prevent the accumulation of moisture under the membrane. There should be a minimum gap of 20 mm between the underside of the substrate and any insulation.
- Sheets must be laid to provide an adequate fall in accordance with E2/AS1 to ensure efficient water drainage from the deck or roof substrate.

- The fall must also be in accordance with the selected membrane suppliers/ manufactures specification and installation instructions.
- Seal all cut edges of boards by applying a compatible bead of adhesive prior to installing. The adhesive bead must not be allowed to dry and become hard on the surface.
- String lines should be used to ensure the first run of flooring is straight and true.
- Once the first board is positioned accurately on the joist with adhesive in place and fastened to prevent movement, the next board should be placed into position, glued, and fixed.
- Where installing on joists or rafters, sheets must be installed perpendicular to the run of joists or rafters. Lay sheets in a staggered brick bond pattern. Sheets should be continuous over three joists (two spans) except at roof/deck edges where infill sheets may be required. Sheets must be supported at all edges and therefore may require additional blocking.
- All jointed sheets must have a 2 to 3mm expansion gap.
- Install all timber fillets to internal corners and drip edges as required by the membrane specification or building consent.
- Sheets must be glued using a suitable construction adhesive. A continuous 5 mm bead of adhesive must be used to the full perimeter of the sheet and to all intermediate joists and additional blocking. Ensure that the selected adhesive is compatible with the plywood treatment and the selected membrane system.

5.9 Soffits and Eaves

- CD Structural plywood at soffits and eaves must be fixed to supporting framing at 75 mm centres. For wind zones up to and including High, use nails with a minimum size of 60 mm × 2.8 mm. In Very High and Extra High wind zones, nails must be 75 mm × 3.15 mm. Local pressure zones, as defined by AS/NZS 1170, are areas within 20% of the building's length, width, or the average of the gutter and ridge height.
- Designers and builders must review site conditions to ensure appropriate fixing is applied. Engage a consulting engineer to assess site conditions, calculate wind pressures for the specific location, confirm fastening and span requirements, and verify that the truss system can withstand the loads transferred through the plywood.
- All plywood used must be treated to H3.1 or H3.2 standards for durability. We also offer an alternative V-Groove plywood option—visit our website for more details.

6. Finishing

6.1 Finishing

The finishing requirements for IBS CD Structural Plywood depend entirely on the intended application of the product. Each case demands a different approach to ensure both performance and aesthetic longevity.

1. Bracing Element

When IBS CD Structural Plywood is used purely as a bracing element within a wall system, no additional finishing is required. The sheets are installed for structural performance, and surface treatments are unnecessary unless specified for other reasons such as fire rating or internal exposure.

2. Flooring Applications

For flooring, it is essential that the plywood is protected as soon as practical after installation. This can be achieved by:

- Applying a paint finish to seal the surface.
- Installing a waterproof membrane in wet areas such as bathrooms or laundries. (H3.2 CCA Treated CD Structural Ply only).
- Covering with carpet, vinyl, or other floor coverings in dry areas.
- For sheet vinyl or laminate flooring, install a flexible underlay or sheet underlay such as IBS Hardboard Underlay as required by the vinyl manufacturer's technical data. It is also recommended to install IBS Hardboard Underlay when laying a carpet finish.

Prompt finishing prevents moisture ingress and surface degradation, especially in high-traffic or moisture-prone environments.

3. Wall Linings

When used as an internal wall lining, IBS CD Structural Plywood should be sealed to protect the surface and enhance appearance. Acceptable finishes include:

- Polyurethane coatings for a clear, durable finish.
- Paint finishes for colour and protection.
- Wood stains to highlight the natural grain while offering surface protection. Please ensure that you apply Polyurethane after using stains to protect against moisture.

4. Ceiling Linings

Ceiling applications follow similar finishing protocols as wall linings. Use:

- Polyurethane for a natural timber look.
- Paint or stain depending on the desired aesthetic and lighting effects. Please ensure that you apply polyurethane after using stains to protect against moisture.

5. Surface Preparation Before Finishing

Before applying any finish:

- Fill all visible holes (e.g., from nails or screws) using a flexible-grade wood filler.
- Sand the surface thoroughly using 280–320 grit sandpaper to ensure a smooth, even base for finishing products.

6. Moisture Exposure and Surface Checking

If the plywood 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 minimize visual imperfections and prevent further moisture ingress.

7. Repairing Bubbling in Plywood

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

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

7. Maintenance

Under normal conditions, IBS CD Structural Ply will need no maintenance as long as the protective finished layer or coating has been maintained.

Regular inspections should be carried out to check the sheets are not damaged by humidity or moisture. If there is evidence of swelling to bracing sheets, they must be removed and replaced with new ones.

If water damage does occur to an area where IBS CD Structural Ply has been used, first remove the protective layer. Then make sure the area is allowed to dry thoroughly.

The maintenance requirements for the finished layer or coating will depend on the supplier's instructions. This will typically include:

- Regularly washing and/or wiping clean protective surfaces to remove mould, scale and/or soap deposits.
- Checking the sealant joints around fixtures.

For more information visit ibs.co.nz for additional information and technical support.

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 CD Structural Plywood (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 IBS CD Structural Ply follows the New Zealand Building Code NZBC and will depend on the end use from proven date of purchase or dispath from IBS whichever date is the earliest.

(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.

9. Technical Properties

9.1 Technical Properties

CD Structural Plywood – Technical Information

Standards & Certification

- Manufactured to: AS/NZS 2269:2012 Structural Plywood Standard
- Bond Type: Type A Bond using exterior phenol-formaldehyde resin
- Formaldehyde Emission Rating: Super E0 (Low Formaldehyde Emission)

What it means: Super E0 ensures minimal off-gassing, making it safe for indoor environments and compliant with stringent health standards.

Strength Ratings

- **Stress Grade:** F8
- **Bracing Units (BU/m):**

System	Thickness	Wind (Concrete)	EQ (Concrete)	Wind (Timber)	EQ (Timber)
IBSCDS01	12 mm	123 BU/m	132 BU/m	123 BU/m	132 BU/m
IBSCDS02	7 mm	130 BU/m	132 BU/m	130 BU/m	132 BU/m
IBSCDS03	7 mm	94 BU/m	95 BU/m	94 BU/m	95 BU/m
IBSCDS04	7 mm	68 BU/m	47 BU/m	68 BU/m	47 BU/m
IBSCDS05	7 mm	61 BU/m	72 BU/m	61 BU/m	72 BU/m

Glue Line

- **Bonding Resin:** Exterior phenol-formaldehyde resin
- **Glue Line Testing:** Ultrasound tested for blowouts
- **Durability:** Designed for structural integrity under moisture and temperature fluctuations

Veneer Grades – C Face & D Face (AS/NZS 2269)

C Face (Front):

- Sound knots < 50 mm
- Minor filled defects
- Sanded to 150 grit

D Face (Back):

- Knots < 70 mm
- Unfilled defects allowed
- Sanded to 100 grit

Defect Allowance: No open knotholes; limited synthetic repairs; up to 8 wood patches

Mechanical Properties

Property **Value**

MOE (Modulus of Elasticity) 10,000 MPa (typical for F8 grade)

MOR (Modulus of Rupture) 38 MPa (typical for F8 grade)

Note: Values are indicative and should be verified for specific applications or engineering designs.

Thermal Conductivity

CD Structural 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
15	0.134
18	0.158

Fire Tests on Building Materials

CD Structural 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 CD Structural Ply by AWTA Product Testing, Australia, February 2011.

Table: EARLY FIRE HAZARD PROPERTIES FOR CD STRUCTURAL 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

10. Additional Resources

10.1 Compliance and Information

For compliance & information of IBS CD Structural Plywood refer to:

- IBS CD Structural Plywood Warranty.
- 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 makes IBS CD Structural Plywood different from other grades?

A. IBS CD Structural Plywood has a superior grade with no open face knotholes and no more than 8 wood patches with limited synthetic repairs on the face. It has a reasonably clean face veneer with defects filled and finished with 150 grit sanding on the face veneer and 100 on the back veneer.

Q. Is IBS CD Structural Plywood suitable for external cladding?

A. No, CD Structural Plywood is not recommended for external cladding.

Q. Can IBS CD Structural Plywood be used for flooring?

A. Yes, CD Structural Plywood can be used for flooring, providing a stable and strong base for floors.

Q. What are the benefits of using IBS CD Structural Plywood?

A. The benefits include its structural integrity, clean face veneer, and suitability for various applications such as wall bracing, flooring, roofing and decking.

Q. How is IBS CD Structural Plywood identified?

A. IBS CD Structural Plywood is identified by a blue stripe down the middle of the short edges of the panel.

Q. Can IBS CD Structural Plywood be used for concrete framework?

A. Yes, CD Structural Plywood can be used for concrete framework to an F3 Standard NZS 3114-1987.

Q. What is the bonding type used in IBS CD Structural Plywood?

A. CD Structural Plywood uses WBP (Weather and Boil Proof) A-Bond Resin for bonding.

Q. What is the importance of the F rating for plywood?

A. The F rating helps builders choose the right type of plywood for their specific needs, ensuring that the material will perform as expected under various conditions.

12. Limitations

The information contained in this document is current as at October 2025 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 CD Structural Plywood 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.

IBS CD Structural Plywood

Design & Installation Guide

SUSTAINABLE BUILDING PRODUCTS

Scan the QR code to view all IBS CD Structural Plywood documents.

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