

# IBS FIBRE® CTU

## Design & Installation Guide



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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.

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### 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.

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- IBS **EUROFloor**
- IBS **EUROLine**
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- IBS **Structural Ply**
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- IBS **Decorative Ply**
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- IBS **Showerline**
- IBS **Softboard**
- IBS **Hardboard**
- IBS **Peg Board**
- IBS **Acoustic Panels**
- IBS **Mini Panels**

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**Contact us for more information or to talk to our team.**

[www.ibs.co.nz](http://www.ibs.co.nz) | 0800 367 759 | [info@ibs.co.nz](mailto:info@ibs.co.nz)

# 1. Introduction

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This document is intended for designers and installers to ensure that IBS FIBRE® CTU is specified and installed correctly.

## 1.1 Introduction

IBS FIBRE® CTU cement board is an excellent choice for ceramic tile backing in dry construction projects. Resistant to prolonged moisture exposure, it does not support or encourage mould growth in damp environments. Its delamination strength can be up to 70% greater than that of water-resistant plasterboard.

Featuring minimal moisture movement, IBS FIBRE® CTU cement board offers a stable and long-lasting base for ceramic and stone tiles, ensuring it won't warp or deform over time.

The following application guide provides essential recommendations for tiling professionals working in interior settings. For additional information or specific questions, please contact our Technical Department.

## 1.2 Scope

The scope of this specification applies to the use of IBS FIBRE® CTU in buildings with structures suitable for the intended work. This includes applications as a tile substrate over existing or new reconstituted wood floors (such as plywood, particle board, Oriented Strand Board (OSB), and tongue-and-groove timber) as well as for wet area linings in bathrooms, kitchens, laundries, and internal rooms with high humidity. For further details on appropriate applications, please consult the relevant guidelines

This document is intended for use by architects, builders, designers, and specifiers involved in the specification of IBS FIBRE® CTU.

## 1.3 Sizes and Applications

TABLE 1 - IBS FIBRE® CTU Technical Specifications		
Length (mm)	Width (mm)	Thickness (mm)
1800	900	6
1800	1200	6

## 1.4 Benefits of IBS FIBRE® CTU:

**Easy Nailing:** The board features dots on its face, providing clear nailing points for quick and accurate installation. This ensures a secure fit and reduces the risk of errors during installation.

**Reduced Grout Line Cracking:** Using IBS FIBRE® CTU significantly reduces the risk of grout lines cracking, ensuring a long-lasting and flawless finish.

**Impact Resistance:** Built to withstand everyday wear and tear, IBS FIBRE® CTU offers long-lasting durability.

**Moisture Resistance:** Engineered to resist moisture, protecting your building from potential damage and mould growth.

**A Great Substrate for waterproofing:** This is the ideal choice for a substrate for tiles to be installed after your waterproofing membrane is done.

IBS FIBRE® CTU is Codemark certified, ensuring compliance with the New Zealand Building Code.

## 1.5 Codemark

IBS is the certificate holder of CodeMark for IBS FIBRE® CTU. CodeMark is third party certified, allowed for under the Building Act 2004.

A CodeMark certification offers several key benefits:

- **Streamlined Approval Process:** Building Consent Authorities must accept CodeMark certified products as compliant with the NZ Building Code, simplifying the building consent process.
- **Quality Assurance:** CodeMark certification is a consistent and objective measure of quality, ensuring that products meet high standards.
- **Reduced Risk:** Using CodeMark-certified products reduces the risk of defects and installation issues, as these products are thoroughly assessed and verified.
- **Confidence:** It provides confidence to designers, builders, and consumers that the products will perform as expected and comply with regulatory requirements.

## 1.6 Supporting Info & Documents

This document must be read in conjunction with the:

- IBS Product Specification for IBS FIBRE® CTU
- IBS Maintenance and Warranty for IBS FIBRE® CTU

CAD details and all other information including any updates are available at [www.ibs.co.nz](http://www.ibs.co.nz).

## 2. Best Practice

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### 2.1 Health & Safety

IBS FIBRE® CTU complies with section 9.7.2 of 'E2/AS1'. The information in this document is consistent with the requirements outlined in NZBC Acceptable Solution 'E2/AS1'. Visit [www.ibs.co.nz](http://www.ibs.co.nz) for more information.

**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 FIBRE® CTU cement boards are 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.

When the crates have to be removed from a box container, care must be taken NOT to expose crates or pallets to the shock of any impact, as the shock could result in cracks in the boards.

#### 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

IBS FIBRE® CTU fibre cement boards are supplied with protective plastic sheeting wrapped around the timber crates. This protection should not be removed until site and structural conditions are prepared and ready for panel installation.

All IBS FIBRE® CTU fibre cement boards must be stored flat on pallets or gluts 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 Handling of IBS FIBRE® CTU Cement Boards

When handling IBS FIBRE® CTU fibre cement boards, several important considerations should be kept in mind to ensure both safety and the integrity of the boards. Proper handling techniques not only help prevent damage to the product but also minimize the risk of injury during transport and installation.



**Figure 1**  
Protective Plastic Sheetting

The following must be taken into consideration when handling IBS FIBRE® CTU cement boards.



**Figure 2**  
Whenever possible, lift the panel from the stack below rather than slide panel or drag off the stack. This will prevent damage by scratches to the lower panel.



**Figure 3**  
Always carry the panel on edge but DO NOT store on edge.

### Preparation and Planning:

Before handling the boards, assess the work area to ensure that it is clear of obstacles.

Make sure that all tools and equipment needed for installation are readily available.

Planning the transportation route can also help avoid any unforeseen challenges.

## **2.4 Lifting Techniques**

Always use correct lifting techniques to prevent injury. Bend at the knees, keep your back straight, and lift with your legs rather than your back. When moving larger panels, it is advisable to use a team lift to distribute the weight evenly and avoid strain.

### **Use of Equipment**

Whenever possible, utilise equipment such as forklifts or pallet jacks to move the boards, especially when dealing with multiple panels. This not only makes the process more efficient but also reduces the risk of dropping or damaging the boards.

### **Protection During Transport**

Ensure that the boards are securely fastened on their pallets to prevent shifting during transport. Using straps or nets can help keep them stable and minimize the chance of accidental falls or damage.

### **Environmental Conditions**

Be mindful of the environmental conditions during handling. Avoid exposing the boards to moisture, extreme temperatures, or direct sunlight for extended periods, as these factors can compromise their quality.

### **Personal Protective Equipment (PPE)**

Always wear appropriate personal protective equipment, including gloves, safety goggles, ear defenders and dust masks. This is particularly important when cutting or sanding the boards, as dust, noise and debris can pose health risks.

### **Inspection Before Use**

Before installation, inspect the boards for any signs of damage or defects. If any boards are found to be compromised, they should be set aside and not used until further evaluation.

By taking these precautions into account, you can ensure the safe handling of IBS FIBRE® CTU cement boards, thus facilitating a smoother installation process and enhancing the overall quality of the project.

## 2.5 Cutting

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

It is recommended that fibre cement saw blades (see figure 4, 5) are used to cut the panels on site. These blades have been designed especially for fibre cement and when correctly employed, a high level of finish can be achieved. The blade is uniquely designed with vibration damping composite body construction and diamond tipped teeth shaped to give a tear-free edge.

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



**Figure 4**  
Fibre cement blade.



**Figure 5**  
Fibre cement blade.

## 2.6 Drilling

IBS FIBRE® CTU cement boards should be drilled using preferred and more efficient tungsten carbide-tipped drills with point angles of 60° to 80° rather than the usual 120° type.

## 2.7 Service Penetration

Very often apertures need to be cut within a board in order to allow for penetration of services such as switchboxes, lights, access panels etc. Therefore, the following procedures would serve as general guidelines to achieve this requirement.

### 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 a rasp.

## 3. Durability

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### 3.1 Compliance

Similar to other products containing quartz (such as concrete and clay), IBS FIBRE® CTU can release dust containing quartz particles when mechanically processed (e.g., cutting, sanding, drilling). Inhalation of high concentrations of this dust may irritate the respiratory system and could also cause irritation to the eyes and skin. Prolonged or high-level exposure to respirable quartz dust can lead to lung disease (silicosis) and increase the risk of lung cancer.

#### **To minimise risk:**

Use cutting tools equipped with dust extraction or suppression features whenever possible. Ensure proper ventilation in the work area. Protect against dust exposure by wearing suitable personal protective equipment, including safety goggles, protective clothing, and an approved respirator, such as a dust mask of at least type P2.

For additional safety information, please refer to the relevant Product Data Sheet, available upon request.

### 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. Please refer to our website regularly for the most up-to-date installation guidelines, as we periodically update them.

### 3.3 Conditions

- Install over new or existing substrate, such as Plyfloor, OSB flooring, or particle board flooring.
- When using IBS FIBRE® CTU, you should apply a waterproofing system prior to installing tiles if in a wet area.
- Ensure the existing substrate is level using a straight edge and is not out of level by more than 1mm over 1 metre length.
- Ensure the substrate is clean, dry, and free from dust or debris before installation.
- Allow adequate curing time for any adhesives or compounds used before laying tiles.

- Maintain a consistent temperature and humidity level during installation to ensure optimal performance.
- Follow manufacturer guidelines for expansion joints and movement accommodation.
- Inspect the IBS FIBRE® CTU for any damage before installation; replace any damaged sheets.
- Walls shall include those provisions as required by the NZBC Acceptable Solution 'E2/AS1' 'External Moisture'. In addition all wall openings, penetrations, junctions, connections, window sills, heads and jambs must incorporate appropriate flashings for waterproofing. The other materials, components and installation methods used to manage moisture in external walls, must comply with the requirements of relevant standards and the NZBC.
- For further information on designing for weathertightness refer to BRANZ Ltd and the Ministry of Business Innovation and Employment (MBIE) updates on the following websites respectively, [www.branz.co.nz](http://www.branz.co.nz) and [www.building.govt.nz](http://www.building.govt.nz).
- For timber frame walls longer than 12m, it is best practice to allow for construction joints to accommodate movements generated due to timber shrinkage or deflections.

### **3.4 Prohibited Uses**

Specifiers, designers and installers must ensure that any time that IBS FIBRE® CTU 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.

### **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.



# 4. Design

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## 4.1 Preparation

The installer must check that the subfloor is structurally sound and in good conditions. All unevenness, deformations, warping or loose pieces, must be properly fixed and removed before IBS FIBRE® CTU is laid over the substrate. If IBS FIBRE® CTU is not totally supported by the subfloor, it will crack and affect the quality of rigid finishes installed on top of it (stone, ceramic tiles, etc.).

Subfloors must comply with the local building codes and standards. Maximum allowable deflections for rigid finishes cannot be greater than  $L/360$ .

Remove existing floor coverings, check the floor is clean of dust, grease and any dirt and reasonably flat and well nailed down.

Ensure the floor and supporting framework is adequate to support the tiling, is firmly fixed and the underside is well ventilated and free from damp.

If the floor is warped it may need sanding flat.

## 4.2 Sheet Layout

IBS FIBRE® CTU must be installed in a staggered pattern. Position the sheet length across the direction of the subfloor underlay. The sheet edge must not coincide with the underlay floor joint.

Allow a gap of at least 5mm between the edge of the IBS FIBRE® CTU and the perimeter / vertical walls. This gap can be covered by the skirt, but the lower edge of the skirting cannot be adhered to the surface of IBS FIBRE® CTU and the finish. This gap is needed to absorb the natural moisture and thermal movement of flooring system, you may also use a flexible sealant to seal this gap.



**Figure 6**  
Vertical alignment



**Figure 7**  
Horizontal alignment

### **4.3 Framing**

In order to achieve an acceptable wall finish, it is imperative that framing is straight and true. Framing tolerances must comply with the requirements of NZS 3604. All framing shall be made flush.

### **4.4 Moisture**

It is the responsibility of the specifier to identify moisture related risks associated with any particular building design. Wall construction design must effectively manage moisture, considering both the interior and exterior environments of the building, particularly in buildings that have a higher risk of wind driven rain penetration or that are artificially heated or cooled.

# 5. Installation

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

## 5.1 Installing sheets for Dry areas

IBS FIBRE® CTU can be nailed or screwed onto the subfloor layer. Maximum distance between fixing elements cannot be greater than 150mm.

Corners must be fixed following the pattern shown on Figure 6 and Figure 7 Section 4.

Screw or nail the board as per Figure 9 Section 5. Lay tiles and adhesives in accordance with the manufacturer's recommendations.

### Substrate Preparation

Check that the floor is level within 1mm over a 1m length using a straight edge; if the floor is warped or cupped, rough sand the entire surface before installing the underlay. Additionally, ensure that both the floor substrate and the Ceramic Tile Underlay sheets are free of dust, dirt, and grease before fixing the underlay.

### Cutting

Refer to clause 2.5 for the installation of IBS FIBRE® CTU fibre cement Sheet.

### Underlay Fixing

When installing Ceramic Tile Underlay over particle board, plywood, or composite flooring substrates, adhesive must be used in addition to nails. Apply adhesive to the back of the underlay sheet using a 3mm notched trowel, paying special attention to the edges. Alternatively, you can apply a continuous 5mm bead of adhesive at 50mm intervals, again focusing on the edges.

For tongue-and-groove timber or hardwood floors, the Ceramic Tile Underlay can be secured using nails only. Sheets should be laid closely in a staggered (brick) pattern and perpendicular to the direction of the flooring substrate, ensuring that joints do not align with the timber floor joints (a minimum offset of 100mm is required for sheet flooring substrates).

Make sure to leave a 5mm gap between the wall and the sheet edge. Temporarily secure each sheet with two or three nails to prevent movement, and fill the gap between the underlay and wall with flexible sealant.

### **Internal Floor - Wet Area**

When scoring the Ceramic Tile Underlay, use a straight edge as a guide and score the face of the sheet. Firmly support the sheet near the cut and snap it upward to break it.

### **Waterproofing Membrane**

A waterproofing membrane must be applied over the Ceramic Tile Underlay if in a wet area before the tile adhesive is applied.

When tiles span the butt joints of IBS FIBRE® CTU, all joints should be reinforced with a 200mm wide strip of fiberglass mesh embedded in the membrane.

For all internal wet areas and exterior tile applications, IBS FIBRE® CTU must be waterproofed in accordance with AS 3740 before tiling. All sheet installation should be completed as specified prior to applying the primer and waterproofing membrane.

Ensure that the sheet is dry and free from surface dust and dirt before applying the primer. The primer and waterproofing membrane can be applied directly over countersunk screw or flush nail heads, ensuring compatibility.

Apply a coat of appropriate primer to the entire surface of the IBS FIBRE® CTU, following the manufacturer's guidelines for coverage areas and specific instructions. Refer to suitable waterproofing manufacturers for recommendations.

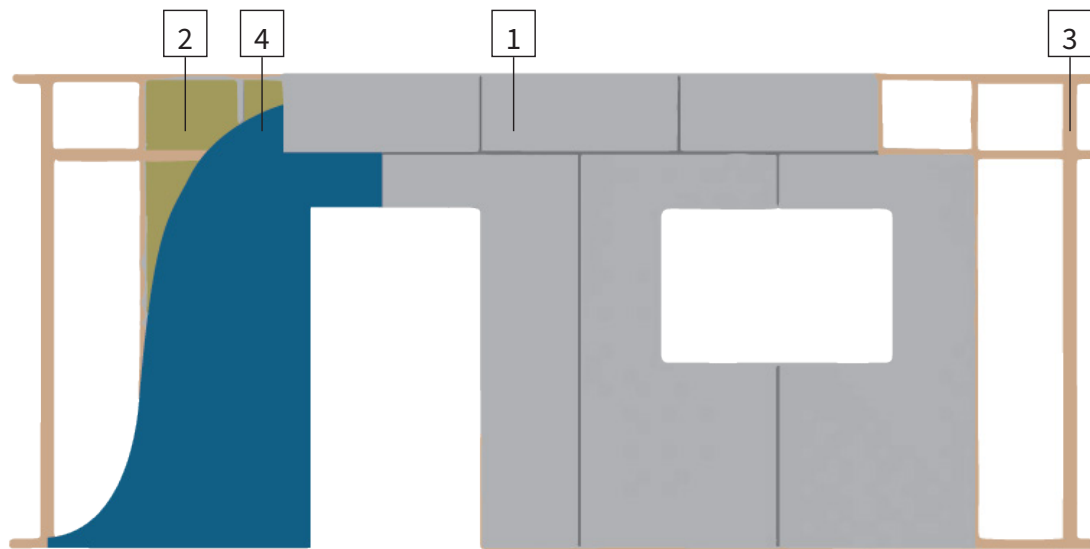
### **Control Joints**

For internal applications, a control joint must be incorporated in the IBS FIBRE® CTU Sheet every 5m in both directions or at points where dimensions change (see Section 5.4). These control joints should extend through the tiles and be filled with a flexible sealant.

## 5.2 Sheet Fixing

IBS FIBRE® CTU can be nailed or screwed onto the subfloor layer. Maximum distance between fixing elements cannot be greater than 150mm.

Screw or nail the board as outlined in Figure 9. Lay tiles and apply adhesive following the manufacturer's recommendations.



**Figure 8**  
Timber framing

- |    |                                    |    |  |
|----|------------------------------------|----|--|
| 1. | IBS FIBRE® CTU fibre cement boards | 3. | Timber batten                            |
| 2. | Thermal insulation                 | 4. | Building underlay membrane if applicable |

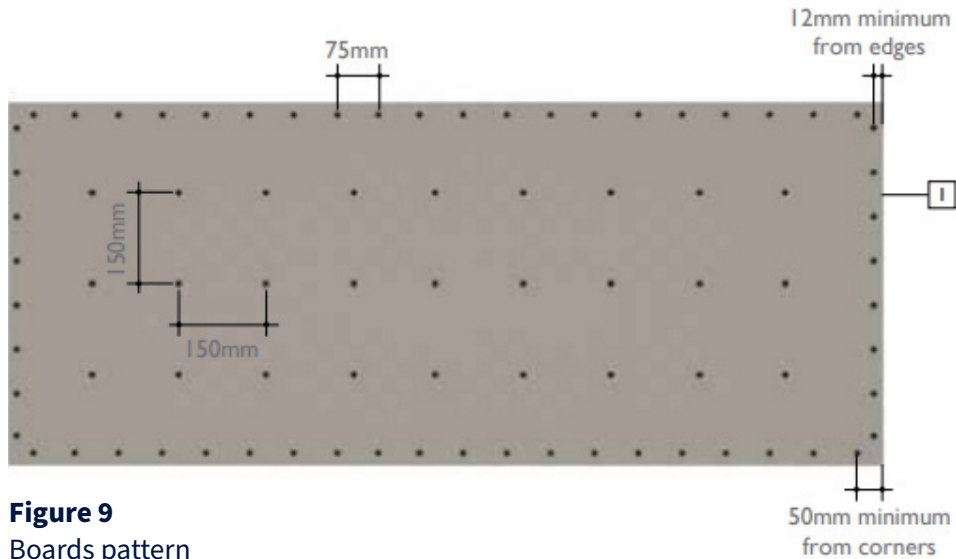
### Underlay Fixing

When installing IBS FIBRE® CTU over particle board, plywood, or composite flooring substrates, adhesive must be used alongside nails. Apply adhesive to the back of the underlay sheet with a 3mm notched trowel, ensuring to focus on the edges.

Alternatively, you can apply a continuous 5mm bead of adhesive at 50mm intervals, again paying attention to the edges.



Make sure to leave a 5mm gap between the wall and the sheet edge. Temporarily secure each sheet with two or three nails to prevent movement, and fill the gap between the sheet and wall with flexible sealant. The nail should be installed inside out.



**Figure 9**

Boards pattern

**Note:** Secure the sheets starting from the center and working outward, carefully following the pre-marked nailing pattern, ensuring all fasteners are driven flush with the sheet surface. Use 25 x 2.5mm underlay nails or 25 x 3.06mm coil nails for best results.

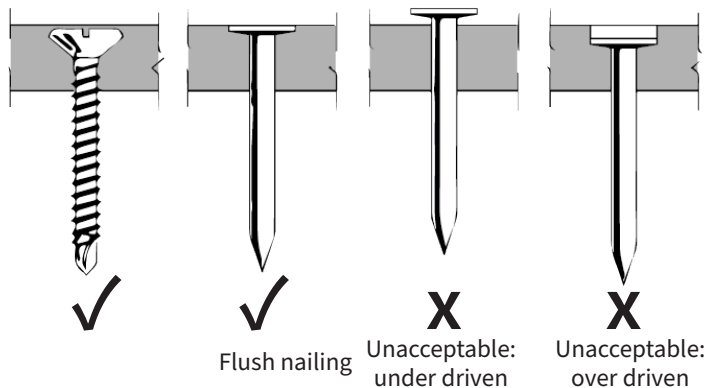
### 5.3 Fixing IBS FIBRE® CTU

IBS FIBRE® CTU fibre cement boards can be fixed using jolt head galvanized or stainless steel nails, or screws, either galvanized or stainless.

As shown in Figure 10 ensuring that the nail head finishes flush with the sheet.

#### Fixing requirements

55 x 2.8mm flat head and jolt head galvanized or stainless steel.



**Figure 10**

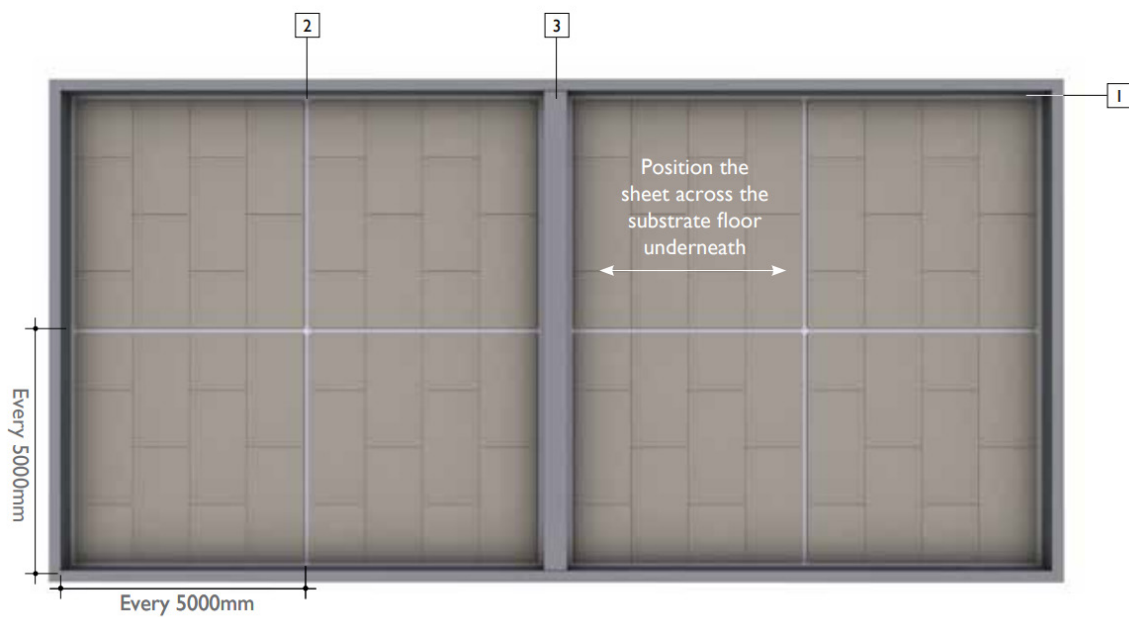
Fastener depth

## 5.4 Control Joints

Movement stress from dimensional changes due to varying temperature or moisture conditions can cause cracking and other symptoms of stress. Control joints are required where existing movement joints are located if a floor is longer than 5000mm.

Please note that control joints must not be covered by any rigid floor covering such as tiles. The control joint between the boards must be greater than 5mm and less than 10mm.

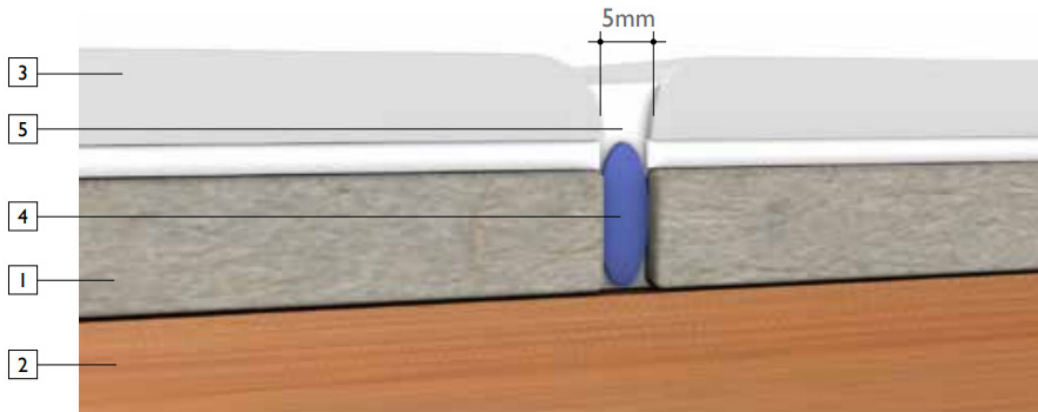
Place a backing rod into the joint and compress firmly until it is resting on the timber or steel joist. Apply a flexible sealant to the remainder of the joint. Refer to Figure 12.



**Figure 11**

Movement and perimeter joints

1. Leave a 5mm gap around the perimeter, maintaining a distance of 5mm from walls and adjacent boundaries.
2. Movement joints
3. Walls and perimetral boundaries



**Figure 12**

Movement joints

- |                       |                      |            |
|-----------------------|----------------------|------------|
| 1. IBS FIBRE® CTU 6mm | 3. Tiles / Finishing | 5. Sealant |
| 2. Floor substrate    | 4. Backer rod        |            |

### Flexible Sealant Application Guidelines

- Prime the joints before applying the flexible sealant.
- Use high-quality flexible sealants, such as Sikaflex MS, Sikaflex AT-Facade, or similar products.
- For paving paint finishes, ensure that the finish coating stops on either side of the flexible sealant to prevent damage to the paint.
- In some cases, the sealant may be colour-matched to the finish coating; check with the sealant manufacturer for details.
- Follow the sealant manufacturer's instructions for joint preparation and priming.
- Verify the compatibility of the joint sealant with the membrane coating, as the coating will be applied over the sealant joint.

# 6. Finishing

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## 6.1 Preparation

IBS FIBRE® CTU must be finished with a suitable floor covering to suit the intended application. For the suitability and installation requirements of floor coverings, check with the manufacturer.

### Screeds

Where the application requires the flooring have falls created and this was unable to be achieved within the floor framing prior to flooring being installed, a 15mm minimum mortar bed screed may be used. An alternative is an epoxy mortar screed. The surface of the flooring must be thoroughly clean and dry prior to applying the screed as per manufacturer's instructions. To prevent cracking of floor tiles, the mortar bed must be reinforced over all joints in flooring sheets.

### Selection of tiles

The following brief notes do not cover all aspects of tiling. Further advice should be sought from specialists in these areas.

The importance of choosing the proper tile for a given environment cannot be stressed enough. Manufacturer's catalogue indicate the recommended uses and limitations of their products and should be consulted when unsure.

### Tile adhesives

Because of possible differential movement between tiles and the IBS FIBRE® CTU and the flooring, only approved flexible adhesive and grouts must be used.

Refer to the adhesive manufacturers' specifications for sheet preparation before applying the flexible tile adhesive.

It is essential that all tile systems such as primers, waterproofing membranes, exterior grade flexible adhesives and grouts are all supplied by the same manufacturer to ensure compatibility of products and warranty protection.

### Marble floor tiles

Marble is a relatively weak material and if used as a flooring material should be isolated from structural movement. This can be achieved by modifying the flooring system to incorporate a fully reinforced mortar bed as shown in Figure 13.

It is recommended that the services of a tradesperson experienced in the application of marble tiles be obtained.

### Tiling practice

Refer to the selected tile manufacturer for complete details regarding the laying and fixing of the ceramic tiles, marble, slate and granite stone. Reference can also be made to the BRANZ publication “Good Tiling Practice”.

IBS FIBRE® CTU can be covered with ceramic tiles or stone veneers. Polymer modified tile adhesive can be used.

The installer must observe the recommendations given by the manufacturer at all times. Some adhesives might require adhesive primers before their application.



**Figure 13**

Installation of IBS FIBRE® CTU

1. Joists
2. Floor substrate
3. IBS FIBRE® CTU 6mm
4. Tiles adhesive
5. Tiles / Finish



# 7. Care & Maintenance

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## 7.1 Care & Maintenance

Under normal conditions, IBS FIBRE®CTU cement boards will not need maintenance, as long as the surface tiles are maintained.

If water damage does occur to an area where IBS FIBRE® CTU cement boards have been used, first remove the tiles. Then make sure the area is allowed to dry before replacing the water proof system and tiles.

Maintain the grout and tiles in accordance with the manufacturer's requirements.



## 8. Warranty

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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 FIBRE® CTU (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:

- i. 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).
- ii. 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:

- i. 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.

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

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

- i. 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).
- ii. 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.
- iii. IBS reserves the right to supply other comparable materials or products should the warranted Product no longer be supplied by IBS.

**2. This warranty is subject to the following:**

- i. Receipt of evidence of the date of purchase of the Product.
- ii. Evidence satisfactory to IBS of failure of the Product.
- iii. 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.
- iv. The claim must include full details of the alleged defect in the Product.
- v. 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.
- i. 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.

- ii. 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.
- iii. Normal wear and tear, including non- performance related changes, are excluded from this warranty.
- iv. All relevant information relating to the Specifications is uncontrolled in printed format and is available from IBS (refer to [www.ibs.co.nz](http://www.ibs.co.nz)).

## **1. Limitations**

- i. 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.
- ii. 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.
- i. 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.
- ii. 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

IBS FIBRE® CTU is a fiber cement board made of cement, quartz sand, and cellulose fibre, with process of slurring, forming, autoclaving and etc.

The choice of underlay and lining of exterior wall siding, interior wall lining, ceiling and partition system.

### IBS FIBRE® CTU General Properties

TABLE 2 - IBS FIBRE® CTU General Technical Properties		
Parameter	Value	Standard
Apparent Density	>1300kg/m <sup>3</sup>	AS/NZS 2908.2
Tolerance on Length, Width and Thickness	Length: ≤±2mm Width: ≤±2mm Thickness: ≤10%	AS/NZS 2908.2
Straightness of Edges	≤: 1mm/m	AS/NZS 2908.2
Squareness of Edges	≤: 1mm/m	AS/NZS 2908.2
Bending strength (Type A, category 3)	≥10MPa	AS/NZS 2908.2
Moisture content	8-13%	ASTM C1185
Water absorption	32±2%	ASTM C1185
Moisture movement	<0.25%	AS/NZS 2908.2
Water permeability	No formation of drops of water on the underside of the specimen after 24h	AS/NZS 2908.2
Warm water	Passed(Li=0.95)	AS/NZS 2908.2
Freeze-thaw	Passed(50 cycles)	AS/NZS 2908.2
Heat-rain	Passed(50 cycles)	EN12467:2012
Soak-dry	Passed(50 cycles)	EN12467:2012
Reaction to fire	Class A1	EN12467:2012
Combustion performance	Non-Combustible	AS 1530 Part 3:1999
Fire Hazard Properties Ignitability Index Spread of Flame Index Heat Evolved Index Smoke Development Index	0 0 0 0-1	AS 1530 Part 3:1999



## 10. Additional Resources

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### 10.1 Compliance and Information

For compliance & information of IBS FIBRE® CTU refer to:

- IBS Product Specification
- IBS Maintenance and Warranty of IBS FIBRE® CTU
- [www.ibs.co.nz](http://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

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## **Q. What is IBS FIBRE® CTU Ceramic Tile Underlay?**

- A. It's a cellulose fibre cement floor panel with a smooth, sanded face, sealed and ready for tiling, offering superior fire performance and dimensional stability.

## **Q. What are the benefits of using IBS FIBRE® CTU?**

- A. It's immune to permanent water damage, will not rot, is fire-resistant, simple and quick to install, and includes a nailing pattern for easy installation.

## **Q. Can IBS FIBRE® CTU be used in wet areas?**

- A. Yes, it's suitable for use as an internal floor substrate in wet areas and provides a flat, even surface for ceramic, mosaic, or natural stone tiles.

## **Q. What are the limitations of IBS FIBRE® CTU?**

- A. It should not be installed on timber where the moisture content is greater than 18%. Always follow the IBS FIBRE® CTU Design and Installation Guide.

## **Q. How do I fix IBS FIBRE® CTU to the floor?**

- A. The product has pre-printed fastener points for ease of installation. Use the correct nails and ensure that one nail is used on each of the dots.

## **Q. Is there a specific nailing pattern for IBS FIBRE® CTU?**

- A. Yes, there is a nailing pattern printed on the face of the sheet for easy installation.

## **Q. Can IBS FIBRE® CTU be used over existing floors?**

- A. Yes, it can be directly fixed to an existing timber, particle board, plywood floor, or OSB EUROFloor.

## **Q. What sizes are available for IBS FIBRE® CTU?**

- A. The panels are manufactured to a nominal thickness of 6.0mm. They are available in 1800x900x6mm or 1800x1200x6mm.

## **Q. Do I need a waterproof membrane with IBS FIBRE® CTU?**

- A. For areas prone to water splash or decks, a compatible waterproofing membrane must be applied.

**Q. Can IBS FIBRE® CTU be used for firewalls?**

- A. Yes, as a non-combustible material, it is designed to be used in conjunction with a fire-rated wall system.

**Q. What should I do for expansion joints when using IBS FIBRE® CTU?**

- A. Allow a minimum of 5mm gap between sheet joints for expansion and ensure tile expansion joints coincide with the panel expansion joint.

**Q. What are the health and safety considerations when installing IBS FIBRE® CTU?**

- A. Always follow health and safety guidelines, handle with care to avoid damage, and consult the installation guide for detailed instructions.

**Q. How do I prepare the substrate before installing IBS FIBRE® CTU?**

- A. The substrate must be clean, dry, and level. Consult the installation guide for detailed substrate preparation instructions.

**Q. What type of adhesive should I use with IBS FIBRE® CTU?**

- A. Use a flexible tile adhesive compatible with the underlay. Consult with your preferred adhesive manufacturer for recommendations.

**Q. Where can I find more information or technical support for IBS FIBRE® CTU?**

- A. Technical assistance is available at [www.ibs.co.nz](http://www.ibs.co.nz), where you can find installation guides, warranty information, and contact details for further support.

For detailed installation instructions and additional support, please refer to the IBS FIBRE® CTU installation guide or contact the technical support team. If you need further assistance, feel free to ask!

## 12. Limitations

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When you are specifying and installing IBS FIBRE® CTU, the IBS FIBRE® CTU Installation Guide must be followed.

- IBS FIBRE® CTU should not be installed on timber framing where the moisture content is greater than 18%.
- Tiles must be installed with a flexible tile adhesive that's also compatible with IBS FIBRE® CTU. Talk to your preferred adhesive manufacturer for recommendations.
- When used as a wall lining ensure stud centres do not exceed 400mm. In high impact areas IBS FIBRE® CTU 6mm may not be suitable.

The below installation areas are considered critical to the successful installation of IBS FIBRE® CTU. Using this sheet as a checklist during installation will aid in problem free product installation and long term product durability post construction.

### **IMPORTANT NOTES:**

All sections of this checklist should be completed in full.

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

The information contained in this document is current as at January 2025 and is based on data available to IBS Sustainable Building Products at the time.

All photographic images are intended to provide a general impression only and shall not be relied upon as an accurate example of IBS FIBRE® CTU 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](http://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.

## 13. Installation checklist

	Items to be checked	✓ Tick <input type="checkbox"/>	Notes
	<b>IBS FIBRE® CTU</b>		
1	<b>Verify Product and Tools:</b> Ensure you have the correct IBS FIBRE® CTU and all necessary tools for installation.	<input type="checkbox"/>	
2	<b>Substrate Preparation:</b> Check that the substrate is clean, dry, and level. Any existing flooring must be securely fastened and free of protrusions.	<input type="checkbox"/>	
3	<b>Moisture Content Check:</b> Confirm that the timber framing moisture content is less than 18%.	<input type="checkbox"/>	
4	<b>Plan Layout:</b> Determine the layout of the underlay sheets to minimise waste and ensure proper coverage.	<input type="checkbox"/>	
5	<b>Cutting to Size:</b> Measure and cut the underlay panels to fit the area, allowing for a 5mm gap between sheets for expansion. Always use dust extraction if using a power saw.	<input type="checkbox"/>	
6	<b>Fastener Points:</b> Utilise the pre-printed fastener points on the underlay for ease of installation.	<input type="checkbox"/>	
7	<b>Nailing:</b> Use the correct nails and ensure that one nail is used on each of the dots.	<input type="checkbox"/>	
8	<b>Fixing:</b> Follow the nailing pattern printed on the face of the sheet for easy installation.	<input type="checkbox"/>	
9	<b>Waterproofing:</b> Apply a compatible waterproofing membrane in wet areas prone to water splash or decks.	<input type="checkbox"/>	
10	<b>Expansion Joints:</b> Allow for tile expansion joints to coincide with the panel expansion joint.	<input type="checkbox"/>	
11	<b>Adhesive Application:</b> Use a flexible tile adhesive compatible with the underlay.	<input type="checkbox"/>	

Items to be checked		✓ Tick <input type="checkbox"/>	Notes
12	<b>Tiling:</b> Proceed with tiling, ensuring tiles are laid evenly and securely.	<input type="checkbox"/>	
13	<b>Finishing Touches:</b> Apply grout and sealant as required, following the tile manufacturer's instructions.	<input type="checkbox"/>	
14	<b>Clean Up:</b> Remove any excess adhesive or grout and clean the tiled surface.	<input type="checkbox"/>	
15	<b>Inspection:</b> Conduct a final inspection to ensure the underlay and tiles are properly installed and secure.	<input type="checkbox"/>	

## Notes:

[illegible]



# IBS FIBRE® CTU

## Design & Installation Guide

January 2025



Scan the QR code to view all  
IBS FIBRE CTU documents.

3 Zelanian Drive, East Tamaki  
Auckland, New Zealand 2013

Contact Us for General Inquiries:

☎ Phone: 0800 367 759

✉ [info@ibs.co.nz](mailto:info@ibs.co.nz)

🌐 [www.ibs.co.nz](http://www.ibs.co.nz)