IBS
SUSTAINABLE BUILDING PRODUCTS

APRIL 2024

IBS EUROFloor

CodeMark
CMNZ70089

Design & Installation Guide

0800 367 759 www.ibs.co.nz info@ibs.co.nz

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SWISS KRONO

NZBN 9429000097253

IBS EUROFloor Product Details			
L x W x Thickness (mm)	**Weight (kg)**	**IBS Product Code**	**GTIN**
2400 x 1200 x 20	37	OSBF202412	09421028769990
3600 x 1200 x 20	52	OSBF203612	09421028769877

IBS EUROFloor Product Details		
Untreated	**Tongue & Groove**	**Exposure (days)**
Yes	Plastic tongue, long edge	90

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

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1. Introduction

This document is intended for designers and installers to ensure that IBS EUROFloor (structural flooring) is specified and installed correctly.

1.1 What is IBS EUROFloor?

IBS EUROFloor is a OSB3 (Oriented Strand Board) panel. The product is a moisture resistant, engineered structural wood panel made from PEFC forests in Europe. IBS EUROFloor is specifically designed for the New Zealand market. IBS EUROFloor is engineered in Europe with our partner Swiss Krono from environmentally sustainable sources. IBS EUROFloor consists of three layers of wood strands bonded together with heat-cured adhesives.

Each layer is orientated at right angles to the adjacent layer creating a strong, dimensionally stable panel that resists delamination and warping. The absence of natural imperfections such as knots provides certainty of performance.

IBS EUROFloor sheets are available in sizes of 2400 or 3600 x 1200 x 20mm and has a plastic tongue and groove jointing system along the long edge of the sheet.

As an OSB3 panel, manufactured in accordance with EN13986:2004, it is suitable for use in humid conditions where the panel in-service moisture content does not exceed 20%.

Compliance with the NZ Building Code (NZBC) is established through product certification (CodeMark).

1.2 EUROFloor Intended Use

IBS EUROFloor may be used in all timber or steel framed buildings;

- That comply with the NZ Building Code and NASH
- Where installers have assured themselves that the existing building is suitable for the intended building work
- On floor framing designs up to and including 3.0kPa UDL
- On floor diaphragms for the transfer of wind and earthquake loads within the scope of NZS 3604
- For stair construction
- For packaging and manufacture of crates etc
- For shelving
- For use as cabinetry or furniture construction.

1.3 Supporting Information

This document must be read in conjunction with the:

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

All other information is available at www.ibs.co.nz.

1.4 About the Manufacturer

SWISS KRONO Group, with its head office in Lucerne/Switzerland, is the world's leading manufacturer of wood-based materials.

The company provides an extensive range in the interiors, flooring and building materials sectors.

SWISS KRONO Group employs around 5,100 employees at ten production sites across the globe.

The eight national companies in the SWISS KRONO Group operate in Switzerland, France, Germany, Poland, Hungary, Ukraine, Russia and the USA. Their products are distributed in 120 countries.

2. Best Practice

The information contained within this Design and Installation guide has been specifically designed in accordance with AS/NZS 1170 to comply with the appropriate design loadings for domestic and commercial buildings.

2.1 Design Considerations

Where IBS EUROFloor is specified by a designer, the designer shall have the appropriate skills, knowledge of the product and access to all IBS EUROFloor technical information.

The designer must consider the floor loading (kPa) to design the appropriate structural floor framing. Where span tables are outside the scope of NZS3604:2011 or Nash Design Standard, the floor must be designed in accordance with AS/NZS 1170.2.

The designer is responsible for considering the building work including but not limited to;

- Drainage and building services within the structural floor framing design
- Structural framing requirements with respect to spans and loadings
- Ventilation of the sub-floor

Visit www.ibs.co.nz for all resources.

2.2 Installation Considerations

The installer will need to have knowledge of basic carpentry skills, knowledge of the product and access to all IBS EUROFloor technical information.

Consideration should be taken depending on the use and scope of the job whether the installer should be an LBP.

Visit www.ibs.co.nz for all resources.

2.3 Wet Areas

IBS EUROFloor can be used in all wet areas including bathrooms, laundries and showers, this is provided that it has the necessary waterproof membrane.

The water impervious membrane must cover the floor and be coved at the walls.

Refer to Acceptable Solution E3/AS1.2.12.

2.4 Finishing the Floor

IBS EUROFloor should not be left in its raw state. It is required to be sealed or overlaid with an appropriate protective covering such as Ceramic Tile underlay for tiles, a membrane system compatible with a composite timber, carpet, solid timber flooring or may be sealed with a polyurethane system. **(refer to manufacturer for coating details)**

If you are going to finish IBS EUROFloor with a clear finish after the construction period you will need to protect the boards against soiling and wearing during the construction period.

Sand the boards prior to polyurethane being applied. Limit sanding as much as possible and to a maximum of 2mm off the face of the board.

2.5 Expansion Gaps

IBS EUROFLoor should have one expansion joint every 10 meters in either direction. You will also need to leave a 10mm gap around the perimeter of the installed boards to allow for expansion and contraction. An expansion gap consists of a 13mm PEF backing rod and then filled with a sealant or caulking compound.

The PEF backing rod and sealant should be installed as per the manufacturer's installation guide. IBS does not have a preference to any one PEF system, if it is an approved and recognised system.

2.6 Minimum Height from the Ground

IBS EUROFloor should be installed with a minimum clearance of 550mm from ground level. Refer to NZS 3604 : 2011

2.7 Handling and Storage

When the panels arrive on site;

- remove the fixing strips to reduce the stress on the panels and store them flat
- limit the time the panels are stored outside, however when stored outside keep away from water or vegetation
- keep them raised off the ground with at least 5 supports on the ground
- cover the panels with weatherproof coverings but allow for ventilation

Important Note:

Before installing, store the boards on site for 48 hours to acclimatise to the installation site moisture level.

Where IBS EUROFloor is exposed to excess moisture, mechanical sanding may be required if swelling has occurred at the panel joints. Ensure that you follow all the handling and storage conditions to ensure that the warranty is not compromised.

2.8 Limitations of IBS EUROFloor

- The floor should not be installed where the timber sub-floor framing exceeds 18% moisture content (MC).
- The maximum exposure to weather must not exceed 90 days.
- IBS EUROFloor may swell when the product gets wet and has a high moisture content. The panel when dried out will return to its nominal tolerance in accordance with EN 317.

2.9 Health and Safety

When installing IBS EUROFloor, take all steps to ensure your safety and the safety of others.

- Use safety glasses, ear protection and wear appropriate clothing and footwear.
- Use all tools in accordance with the relevant instruction manuals.
- Ensure drilling and cutting is carried out in a well-lit, well ventilated room.
- Provide for dust extraction if working in an enclosed space.

For further information, refer to:

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

3. Durability

3.1 Producer Statement

When IBS EUROFloor is stored, handled and maintained in accordance with this Design and Installation Guide then the durability and performance requirements will be met for NZBC (a) B2.3.1 for 50 years.

It is important to note that all details and methods should be followed and observed as well as good building practice to avoid noncompliance.

3.2 IBS EUROFloor CodeMark explained

CodeMark is third party certified. This means that under law, a Building Consent Authority must accept the specification of IBS EUROFloor (the panel and the installation details) as complying with the NZ Building Code, providing that all conditions of the certificate have been met.

Achieving CodeMark also focuses on the quality of IBS EUROFloor panels and the quality and competence of the support provided by IBS. This means that designers and installers can use IBS EUROFloor with confidence that, providing all instructions are followed, IBS EUROFloor will result in building work complying with the NZ Building Code.

3.3 Ensure your information is up to date

- When it comes to specifying products from IBS, ensure that you have the current and up to date technical installation guide.
- If you are unsure, or require more information or guidance, visit www.ibs.co.nz, call 0800 367 759 or email info@ibs.co.nz.
- Any updates are listed on our website www.ibs.co.nz.

4. Installation

4.1 Tools

When installing IBS EUROFloor the following tools and fixings are required, but not limited to:

- Hard tipped handsaw
- Skill saw with tungsten tipped blade
- Electric drill with hole saw and high-speed drill bits
- Caulking gun
- Nail gun optional
- Screw gun optional
- Gorilla Gripper for easy and safe handling of the sheets

4.2 Ancillary Products

Adhesive must be construction grade and compatible with wood or steel products.

Nails - must be a minimum of 60mm annular grooved and either galvanised or stainless depending on the exposure zone.

Screws - must be self-tapping, countersunk head and 45mm x 8 ga.

Important Note:

Mild steel or light zinc coated fixings can be used, however this is not recommended where the floor is exposed to the elements or where a visual finish is required. For the best results, stainless steel fixings are recommended.

Also ensure that the right fixings are used taking into consideration the exposure zone.

4.3 Substrate Preparation

Ensure joists are clean and dry. Ensure that all panels span at least 3 joists.

Apply construction grade adhesive to clean, dry joists before laying the panels.

4.4 Laser Print

All panels should be installed laser print face down onto the joists.

4.5 Fixing Spacing

Maximum Fastener Spacing	
	Nails/Screws
Centres at edges (on board's perimeter)	150 mm
Centres at the intermediate supports	300 mm

Maximum Fastener Spacing from Board's Edge	
	Nails/Screws
Min fixing distance from board's square edge	15 mm
Min fixing distance from boards T&G edge	25 mm

4.6 Type of Fasteners/Adhesive Options

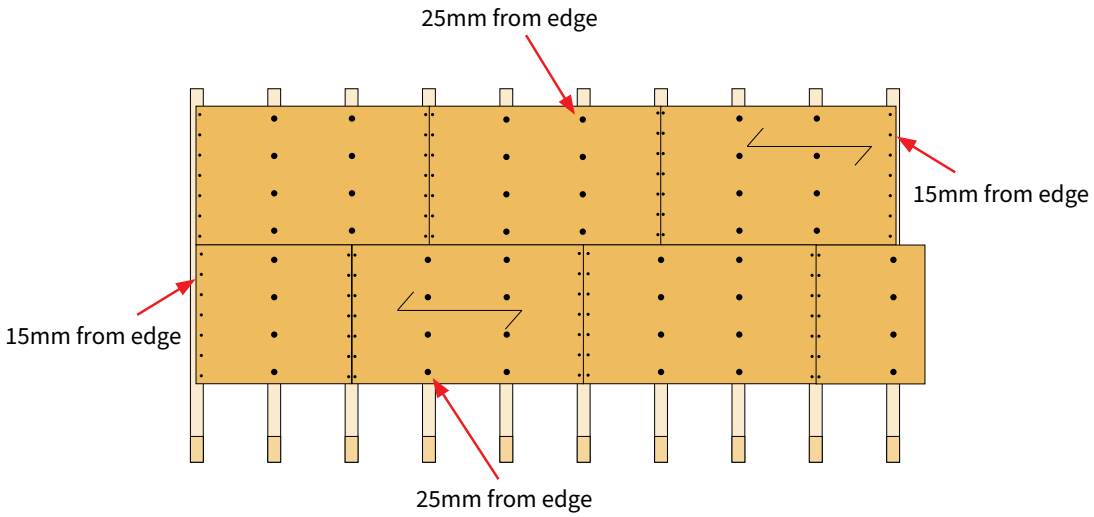
Timber Joists	Minimum Size (mm)	Fixing Centres (mm)	
		Edges	Centres
Annular Grooved Timber Flooring nails	60	150	300
Galvanised Jolt head nails	60	150	300
Self Drilling Screws (Corrosion Resistant)	8 gauge x 45	150	300

Steel Joists	Minimum Size (mm)	Fixing Centres (mm)	
		Edges	Centres
Tek Self Drilling Screws (Corrosion Resistant)	10 gauge x 45	150	300

Adhesives	
Sikaflex®-123 MS Bond	Continuous beads to the top of each joist and between the sheets at the ends and edges of 5 mm. Continuous bead on top of the tongue of 2 mm *Important to follow manufacturers install guide for all adhesives.
Holdfast - Gorilla Grip	
Bostik - Alpha Grip	
Selleys - Liquid Nails	

4.7 Laying the Panels

1. Place IBS EUROFloor with the long edge spanning the supports (ie major axis at right angles to horizontal joists). Ensure the panels are all laid with the laser printed side down onto the joists.
2. Stagger in stacked end joints (brickwork) pattern.
3. Where floors are retrofitted, or installed inside the wall frame, a 10mm perimeter expansion gap should be left.
4. Nail or screw the IBS EUROFloor panels to the joists within 15 minutes of positioning the panels to ensure the adhesive does not go off prior to mechanical fixing.
5. Follow the manufacturers installation instructions.
6. Remove excess adhesive from sheets.
7. If cutting IBS EUROFloor, ensure that you re-seal any cut edges with a water-based polyurethane to maintain the integrity of the wax sealed edge.



4.8 Joist Spacing

Maximum joist spacing is 600mm. The closer the joists are the more rigid the floor.

5. Technical Properties

5.1 Environmentally Friendly

Our supply partner Swiss Krono paves the way for forward looking eco-friendly, high quality buildings for people wishing to create a stronger, healthier home.

Homes that are built with wood and wood-based materials are healthy to live in and good for the environment, whilst letting the occupants enjoy a pleasant, comfortable atmosphere and indoor climate.

Swiss Krono only uses formaldehyde free binders in the manufacturing process to create our panel.

Swiss Krono holds both FSC and PEFC Certifications.

5.2 Eco-friendly Homes

For renovation refurbishment and new eco-friendly homes, thanks to good Swiss precision, IBS EUROFloor has great technical properties and a seamless surface. IBS EUROFloor is well suited for renovating or refurbishing existing buildings and the construction of new eco-friendly homes.

5.3 Max Point Loads

This is calculated as a point load at the mid - point betweeen spans.

Centres (mm)	Max Point Loads (kN)
600	2.1
450	2.4
400	2.5
360	2.7
300	3.0

Important Note:

All flooring sheets must be fixed to a minimum of 3 joists.

5.4 Strength and Formaldehyde Information

Properties	Test Method	Unit	Major Axis (0^0, II)	Minor Axis (0^0, II)	Class 1 AS/NZA 1806.1
Formaldehye Emission	Formaldehyde Release	Mg/m^3	<0,01		E1<1.5
Modulus of Rupture (MOR)	EN 13986	MPa	50	50	19
Modulus of Elasticity	EN 13986	MPa	4930	1980	2750

5.5 Span Table UDL

Deflection	Maximum vertical load 400 crs kN/m^2	Maximum vertical load 450 crs kN/m^2	Maximum vertical load 600 crs kN/m^2
Regular Construction	10.18	7.08	4.53
Diaphragm Construction	10.18	7.04	3.6

5.6 EUROFloor Technical Properties

Panel Tolerances	
Bulk Density	600 Kg / m3
Length and Width Tolerances	+ / - 3 mm
Squareness Acc to EN324-2	2 mm / m
Max Deviation in Board Thickness	+ / - 0.8mm
Thermal Conductivitiy acc to EN 13986	0.13 W/mK
Water Vapour Permeability	>2.0m - Dry
Thickness Swelling acc to EN 317	< 15 %
Coefficient of expansion for 1% change in wood moisture	0.03 %
Air Permeability at 50 PA	0.14 m^3 /hm^2
Waste code EWC	03 01 05
Reaction of fire performace class acc to EN13501-1	D - s2, d0
Sound Absorption Frequency Range 205 Hz to 500Hz	0.10 dB
Sound Absorption Frequency Range 1000 Hz to 2000Hz	0.25 dB

6. Frequently Asked Questions

Q: How Many Joists do I have to span the sheet over?
A: You need to span over 3 joists minimum.

Q: What way do the sheets go on the joists?
A: Sheets go laser print side down onto the joists.

Q: What is the joist spacing required?
A: Maximum 600mm.

Q: Do I need to glue the T & G?
A: IBS recommends a continuous 2mm bead on the tongue.

Q: What do I do in Wet Areas?
A: You can use an approved waterproof membrane in wet areas.

Q: How long can I leave EUROFloor exposed to the weather?
A: The answer is 90 days although we recommend that for best results you keep exposure to a minimum.

Q: What size sheets do you have?
A: We have 3600 x 1200 x 20mm and 2400 x 1200 x 20mm.

Q: Can I lay Vinyl direct to EUROFloor?
A: IBS recommends that a Hardboard Underlay be used under the vinyl to give a good smooth finish.

Q: Can I swap EUROFloor out for alternate product listed on the plan?
A: Yes as the product is Codemark Certified it can be swapped as a minor variation.

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