

## Installation of Ecodure Bamboo or Ecodure Oak on concrete subfloors

### Some basic information you need to know about concrete

- Concrete is made with very large quantities of water - more than 120 litres per cubic metre;
- It often continues to be saturated through rain, once laid;
- It takes a long time to be dry enough to lay any floor covering and even longer to lay timber and bamboo floors;
- It is not a good idea to force dry concrete by using dehumidifiers or heaters. These only dry the surface of the slab, the interior of the slab will continue to be wet. Like a good wine, curing through time is of the essence, thus allowing concrete to dry over time, instead of being forced, is definitely first prize.

### Some basic information you need to know about Bamboo

- Like any timber, Bamboo can be sensitive to moisture changes; however with a few common sense precautions it is unlikely that you will have any issues. Please read our Installation Guide, along with our FAQ's, Maintenance Guide, Terms and Conditions of Sale and Warranty. If you have further questions please do not hesitate to contact us, we would love to help;
- 100% Compressed Bamboo should be acclimatised or conditioned on site for no less than 7-10 days prior to installation. This applies in particular to floor areas over 5 x 5 m<sup>2</sup>. Do not acclimatise Engineered Bamboo or Oak Flooring, leave these in the boxes until installation commences.

### A word about new homes:

- Today's buildings are erected very rapidly, however the interior finishing must not be rushed. Building materials often become very wet during the building process and need plenty of time after the building is closed in, to dry out. Common sense advice is that if your home is not ready for interior painting, it is too soon to be thinking about installing your floor. Flooring should be the last item installed in your home, after all other trades have finished. Pre-paint the skirting boards and install these once the flooring is down.

### Surface tolerances for concrete substrates

- Not all concrete is laid perfectly level and flat, even in a new home. The floor must not have any deviations **greater than 3mm over a 3m straightedge in any given direction and no abrupt deviations greater than 1mm over 250mm**. Floors which do not meet this standard must be ground and/or be professionally levelled. Failure to have the floor sufficiently level can result in bounce, squeaking and wear and tear on the joins of the planks.

**SHOWROOM:** 61 Barry's Point Rd, Takapuna, Auckland • PO Box 303-278, North Harbour Auckland, 0751  
• Phone: 09 489 3602 • Email: sales@ecodureflooring.co.nz

## Laying Ecodure Bamboo or Ecodure Oak on “old concrete”

“**Old concrete**” can be described as a concrete floor in a building that has been completely enclosed and allowed to dry naturally for a minimum of five years. Water must not be able to enter the floor from surrounding site, through retaining walls, subfloor or any other source.

If you have a concrete floor you are advised to have a floating floor.

For **floating floors** on old concrete we specify Accord Premium 5-in-1 Underlay (details for Accord Premium Underlay can be found on our website). While this can be laid directly on the concrete, we specify the use of Sika MB Primer or Thomsit R755 Moisture Barrier to moisture seal the slab. There are several reasons we do this, the first is so that if your slab did not have a membrane at the time it was poured or if the membrane was damaged, water may still be able to enter the slab and make it damp. The other is so that if there is ever a flood (e.g. from a burst pipe) the floor will not be totally saturated and any remedial work to floor coverings will not be delayed as long, as they would if a raw slab had become wet. In our view “an ounce of prevention is worth a pound of cure”. Preventing moisture coming into the house is also helpful in keeping the house warm.

## Laying Ecodure Bamboo or Ecodure Oak on “new concrete”

“**New Concrete**” is best described as concrete less than five years old; concrete that has not been completely enclosed from the weather for more than one year or older concrete which has been re-wet through flooding or other means. Water must not be able to enter the floor from surrounding site, through retaining walls, subfloor or any other source.

If you have “new” concrete, you must **only float the flooring**. Glued down components such as stairs may have to be delayed until the concrete is fully dry. A Bamboo or Oak floor can be floated over new concrete as long as common sense is applied. Some pointers as to whether the building is dry enough are – have the woodwork and walls dried enough to allow painting? Is the concrete slab dry enough? Has the exterior waterproofing of walls been completed and are storm water and field drains fully functional?

How long concrete will take to dry sufficiently to be able to be primed is a complex matter, affected by weather and atmospheric conditions, how much water was in the mix to begin with, etc. The **usual guideline suggests that it will dry about 25mm of thickness per month from when the building is weather tight**. So a 100mm slab will need at least 4 months. Of course these days’ buildings are erected and occupied in this time, and it may be necessary to delay installing floor coverings until a later date. Moisture from deep within the slab will be the last to evaporate.

If you are completely sure that the site and floor is dry enough and will remain so, you can float the floor. We specify using Sika Primer MB or Thomsit R755 to moisture seal the slab, followed by Accord Premium Underlay.

- **Moisture testing** ideally all concrete should be moisture tested with a flooring hygrometer, but in practice this may not be possible or it may not give a definitive answer. A practical solution is to assume that all concrete floors will need to be sealed with a Moisture Barrier sealer, which greatly reduces the moisture that can permeate the floor and the floor is installed as a floating floor. For Bamboo & Oak flooring the hygrometer reading must be less than 70%.
- **Acclimatising or conditioning timber** Solid bamboo must be acclimatised for at least 7 - 10 days on site. Please contact us well in advance of your installation to make sure it is delivered soon enough. You must be satisfied that the building is suitable to receive the bamboo – e.g. dry and secure. Conditioning should take place at the expected normal room temperature and humidity levels before and after installation. Ambient humidity levels should be 40 - 60% RH. Do not acclimatise Engineered Bamboo or Oak boards, these should be left in the boxes until installation.

## Installation basics

- We recommend using an experienced timber floor installer who fully understands the building code, standards and best trade practices, and has read this guide;
- Allow about 7-10% extra material for cutting and grading;
- Inspect the flooring carefully for any blemishes before laying;
- Ecodure Flooring is manufactured for average New Zealand conditions. Bamboo and Oak Flooring are natural products – **expansion and contraction** occur naturally and is caused by changes in humidity and temperature of the environment. This is normal and acceptable and is allowed for on-site, by expansion allowances in the floor. We advise **acclimatising or seasoning** of all solid Bamboo for 7 – 10 days prior to laying. Seasoning should occur at normal living conditions in the rooms where the floor is to be laid, fillet the timber so it is not directly on the floor during this time. Installation requires expansion gaps for the floor to expand and contract. It is recommended to **allow at least 8 - 15 mm around every edge** of the floor and around pillars or other fixtures. Expansion will take place under the skirting boards, kitchen cabinets and other trims. In large rooms ie 5 x 5m<sup>2</sup> plus, more expansion is required. A convenient way to do this is to lift the gib board off the floor or undercut it. Floating floors are secured on all edges by trims or skirtings which allow for expansion to take place.
- **Adhesive** -For floating clicklock floors use Aliphatic PVA on all ends and the underside of each click joint. Remove excess PVA with a slightly moistened rag. Sika T55 can be removed with Sika Cleaner Remover 208. Test this on an offcut first. Stay off the floor for at least 24 hours until the adhesive dries.

- **Skirting boards** - For new building work leave the skirting boards off until the floor is down. If possible lift the gib board up from the floor about 18mm to allow extra expansion space. For renovation work, taking the skirtings off is the best answer, or discuss undercutting with the installer – however this is a compromise in terms of the final finished look.
- **Kitchens** – discuss your flooring choice with your kitchen supplier. Ideally cabinet carcasses without panel ends and toe kicks will be installed before the floor. After the floor is laid the kitchen supplier will then fit the toe kicks and panel ends; please look at our recommendation for order of kitchen installation under FAQ's.

## After installation - care of your floor Ecodure Bamboo or Oak Floor

- After your floor has been installed you will need to **clean it regularly**. Our experience has taught us that a simple routine of sweeping with a soft household broom, followed by a flat microfibre mop, is best. The advantage of Microfibre is that it's a chemical free system, you only need to mist the floor very slightly with a spray bottle of water. We find many vacuum heads are too harsh and you must not use a steam mop or any other wet mop system. For heavily soiled floors and an occasional thorough clean use Bona Wood Floor Cleaner. Do not use any other cleaning products – **please see our detailed Maintenance Guide for Oak & Bamboo for full maintenance recommendations**;
- Maintain a **constant environment**: Before and after your floor has been laid you need to make sure the equilibrium of the environment stays constant. Timber and Bamboo are naturally hygroscopic – this means they may be affected by changes to moisture content in the environment caused by weather conditions, heating, cooling etc. Your house also needs to have adequate ventilation at all times. It is common knowledge that houses can get very hot when left locked up or vacant, this is known as the "greenhouse effect" and this can act to dry the floor out from the top, which may cause permanent changes in your floor. In addition new homes are often very airtight, designers and home owners need to be aware of providing adequate ventilation to prevent elevated internal moisture levels. As a general guide, condensation on the inside of windows indicates that internal moisture needs to be addressed. Be aware of introducing sources of moisture such as unvented driers, washing left on clothes racks, unflued gas heaters, bathrooms with no extractor fans. This advice also applies to installing new insulation in your home after the floor has been installed. Ambient humidity levels are ideally between 40-60% RH.

Failure to fully follow these guidelines and specifications may affect Warranties

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## **Recommended reading:**

BRANZ House Building Guide 2004

BRANZ Level Sustainable Buildings Series - Floor Coverings

BRANZ Bulletin 534 - Overlay Flooring Systems Over a Suspended Floor (2011)

BRANZ Good Practice Guide – Concrete Floors and Basements (1998)

BRANZ Bulletin 513 - Timber Composite Overlay Flooring (2009)

BRANZ Bulletin 515 - Measuring Moisture in timber and concrete (rev. 2010) replaces 424.

BRANZ Bulletin 506 - Laying solid timber strip flooring on concrete slabs (2008)

**Not applicable for Bamboo but good general information**

BRANZ Bulletin 330 - Thin Flooring Materials -2 Preparation and Laying ( 1995)

SIKA products technical literature - [www.sika.co.nz](http://www.sika.co.nz)

THOMSIT products technical literature – [www.thomsit.com](http://www.thomsit.com)

## **Building Standards:**

New Zealand Building Act 1992

New Zealand Building Code (NZBC)

New Zealand Standards NZS3602, 3604 and 4229.

Note – there are no definitive standards in New Zealand for Bamboo flooring.

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