

Solid Flooring Installation Guidelines

foreverbeech solid hardwood flooring is a building material offering beauty, utility, durability and an environmentally sound option. Key guidelines must be followed if your prized floor is to provide the service you expect.

The following points are provided as guidelines only. If you are laying your own floor you should seek the advice of a professional if you have doubts about the specific situation in which you intend to lay your floor.

PREPARATION:

1) Site Evaluation

Check the crawlspace under the floor area where any flooring is to be installed, ensure there is adequate ventilation throughout the crawlspace to allow air to move. Any areas where excessive moisture is apparent a moisture barrier of sealed black polythene needs to be laid on the ground in the crawlspace below the installation area

Check the moisture content of the sub floor as in the following “sub floor specifications”.

2) Wooden Sub-Floors

When installing new flooring over an existing wood floor, a minimum thickness of 18mm is required. When installing a particleboard sub-floor an allowance of 3mm between sheets needs to be made for expansion. To prepare a wood sub-floor, nail any loose areas and sand any high spots from the floor allowing for not more than a 3mm variation in an area of a 3.0m radius.

- Wood sub-floors, i.e. timber battens or joists, should have a moisture content of between 8-12% M.C.
- When fixing over joists, joist spacing is subject to NZ Standards specifications.

3) Concrete Sub-Floors

As a minimum any concrete sub-floor must be allowed to cure for a month per inch of thickness after the building has been completely enclosed prior to the installation of a timber floor.

- Concrete sub-floors must be tested for moisture, installation should not proceed if the moisture reading exceeds 70% RH.
- Concrete floors should be acid washed, shot blasted or diamond ground to ensure the removal of
- Impurities such as lime etc from the concrete.





- A minimum strength of at least 17 MPa must have been achieved prior to the installation of any timber flooring.
- The surface of the concrete must be level to within 3mm in a radius of 3.0m. Approved specially suited leveling compounds may be used to level a concrete sub-floor. Allow leveling compounds to dry properly before installing the timber floor. Concrete moisture sealants of recognized suitability should be used. These are usually in the form of a two-pot epoxy resin. – if in doubt, seek advice.

4) **Pre-Installation Storage**

- Flooring should be stored "in-strip" for a period of up to a week in the conditions of installation (with air conditioning or under floor heating on if relevant), provided that the timber is already within 2% of the required moisture content level.
- Never place the material directly on a new concrete floor and never store it outside while awaiting installation.

5) **Under-Floor Heating.**

A minimum timber thickness of 19mm should be used where under-floor heating is to be installed. (In some cases 13mm parquet could also possibly be used)

- Maximum surface temperature not to exceed 25 degrees Celsius. Safe

guards on thermostat controls are recommended so the maximum temperature is not exceeded. – Seek professional advice regarding this maximum temperature.

- Maximum floor width 9m. Larger areas need to be broken up with expansion mouldings.
- The floor must be heated evenly across the whole area.
- Under-floor heating must be turned on and allowed to get up to temperature prior to laying timber flooring. Check for any 'hot' spots that would potentially cause problems after installation.
- After timber flooring installation slowly raise the temperature to it's desired operating level over a period of seven days, starting two days after installation is complete.
- Maintain humidity levels of 45-60% RH at all times during the year. Use humidifiers and fans where necessary to maintain normal humidity variations.
- Double gluing both the top & bottom edges of the groove on installation is required to increase the strength bond required for under-floor heating installations.

6) **Laying the Floor**

- As a natural material, timber is prone to movement with variations in moisture content, heat and relative humidity in the environment. As a

guide, allow the expansion perimeter of the floor gaps to be at least 2mm per metre of flooring. For example, an 8m long floor will need a 16mm expansion joint at each end, plus the appropriate width allowance.

- Sealing a concrete sub-floor must be done with the appropriate specialist epoxy resin glues. Seek specialist advice if unsure.
- 12mm overlay flooring must never be glued directly to concrete, but rather over the top of either an existing wooden floor or alternatively a plywood sub-base that has in turn to be fixed to the properly prepared concrete sub-floor.
- 19mm full thickness solid strip flooring can be applied directly onto a properly sealed and prepared concrete sub-floor or alternatively can be either nailed or glued to joists.
- Fixing can be by nails and / or glues, and the floor should be cramped and weighted while fixing and during glue curing.
- Flooring glues must be the proper recognized proprietary agents. Check compatibility with your concrete moisture sealant agent if used. Seek advice, as ordinary off the shelf tubes aren't appropriate.

7) Coatings

- Ensure any nail holes are filled after first sealer coats have been applied. There are now a range of available

coating products, ranging from oils and waxes to water and mineral based polyurethanes providing clear or tinted finishes, UV protection and added surface wear resistance. Advice on best options should be sought.

8) General, Care & Maintenance

Do's:

- Place good quality mats both sides of entrance doors to prevent dirt, stones and moisture damage to floor
- Place felt protectors under all chair, table and furniture legs.
- Fit roller chairs with soft rubber wheels.
- Move appliances / furniture by sliding them slowly on upturned carpet.

Don'ts:

- Wax the floor.
- Allow spiked-heel shoes, pebbles or grit onto the floor.
- Use steel wool on the floor.
- Use soap or detergents or pour water on the floor.
- Use ammonia based cleaners.
- Use an extremely wet mop on the floor.



Also See:

<http://www.branz.co.nz>

- NZ Building Standards NZS 3604
- Branz Bulletin 374 – Laying Timber Strip Flooring over concrete slabs
- Branz Bulletin 380 – Timber Internal Linings
- Branz Bulletin 390 – Laying Timber Strip Flooring over Timber Joists

Disclaimer:

While every attempt has been made to ensure the accuracy of these notes, they are intended as a guide only and are never intended to replace expert direction. If in doubt contact your local timber-flooring specialist such as a member of the New Zealand Wooden Flooring Association.

No liability is assumed for reliance on these instructions.

