

## Site/material preparation

- Wood flooring must acclimate for as long as necessary to meet minimum installation requirements for moisture content. We recommend a minimum of 10 days if possible. Always use a moisture meter to monitor the flooring and job-site conditions as the wood flooring acclimates. Eventually the wood flooring should be in equilibrium with its environment and is neither gaining nor losing moisture.

### Plywood/Wood Sub-floors

- Sub-floor must be structurally sound and properly secured with nails or screws every 1000mm along plywood base or every 150mm along battens/joists to reduce the possibility of squeaking.
- Wood sub-floors must be dry and free of wax, paint, oil, and debris.
- Replace any water-damaged or delaminated sub-flooring or underlayments.
- It is essential that basements and spaces between battens are dry.
- A vapor barrier must be established in spaces between battens using 6 mil polyethylene film with joints overlapped and taped.
- During the final pre-installation inspection, sub-floors must be checked for moisture content using the appropriate metering device for wood and/or concrete.

### Sub-floor Preparation

- Preferred sub-floors – 18mm Marine Grade Plywood or 18mm OSB PS2 Rated sub-floor/underlayment, sealed side down, with batten spacing of 40cm center-center
- Minimum sub-floors – 18mm CDX Grade Plywood subfloor/underlayment
- Sub-floor moisture check. Measure the moisture content of both the sub-floor and the hardwood flooring with a pin moisture meter.
- Sub-floors must not exceed 12% moisture content. The moisture difference between sub-floor and hardwood flooring shall not exceed 4%.
- If sub-floors exceed this amount, an effort should be made to locate and eliminate the source of moisture before further installation.
- Do not nail or staple over particleboard or similar product.

### Concrete, preparing for direct glue down installation on concrete

- MAKE SURE THE CONCRETE IS FLAT. Make sure the concrete slab is flat to manufactures specification, i.e. 2mm in a 2 meter radius. If the slab is out of specification, consider grinding, having a floating system or both. Many high spots can be removed by grinding, depressions can be filled with various patching or self leveling compounds. Products such as Mapei Ultraplan ([http://www.mapei.com/public/COM/products/501\\_ultraplan\\_gb.pdf](http://www.mapei.com/public/COM/products/501_ultraplan_gb.pdf))
- Concrete moisture meters will show you if the slab is dry enough to install wood. Remember that a meter will only give a dry, or wet indication. Slabs with high meter readings should be checked further using a calcium chloride test.
- Another method for testing a slab is the plastic or rubber mat test. Tape a piece of plastic approximately 30cm x 30cm to the slab for 24 hours, remove and check for moisture accumulation underneath the sheet. If there is obvious water under the matt STOP and carry out a calcium chloride test.
- If the above testing shows that the slab is too wet then you must consider using a topical vapor barrier such as Bostik MVP, Stauf Vapor barrier or equivalent.
- If a slab tests too high in vapor emission to glue a floor down, then you must consider using a vapor barrier and a floating plywood sub-floor or using an alternative installation method
- Sheet vinyl made of PVC may be used as a vapor barrier if installed using an adhesive with the same bond strength as the adhesive used to glue down the wood floor. A topical sealer should be used over the vinyl to prevent plasticizer migration. Keep in mind that if the slab is producing excessive amounts of moisture sheet vinyl may fail as well. Also, mold can grow in the sheet vinyl backing and cause long term problems.
- Concrete has to be clean, free from sealers, waxes, and oil, paint drywall compound etc. Check for the presents of sealers by applying drops of water to the slab, if the water beads up there may be sealers or oils. If the slab has been sealed it can be prepared using bead or shot blasting. This should be done by a professional.
- Look for excessive settling cracks and check these areas carefully for excessive moisture transmission. **SETTLING CRACKS MUST BE ADDRESSED BEFORE THE WOOD FLOORING IS INSTALLED.**
- Do not attempt to glue a wood floor over a chalky or soft concrete slab.

Light weight concrete sub-floors, i.e. gypcrete.

- Make sure the gypcrete is well bonded to the sub-floor, check for hollow spots, cracks and loose areas.
- As with on grade concrete sub-floors make sure the gypcrete is clean, flat to specification and dry.
- Adhesive choice is very important when installing over lightweight concrete, as is product choice. Choose a product that is very dimensionally stable, as any floor that “moves” a lot may pull the gypcrete loose. Consider “floating” systems over Gypcrete. Mapei Lignobond 2 component flooring adhesive ([http://www.mapei.com/public/COM/products/271\\_Lignobond\\_gb.PDF](http://www.mapei.com/public/COM/products/271_Lignobond_gb.PDF) )
- Seal Gypcrete with two coats of latex milk before gluing flooring.

#### Other type sub-floors: Terrazzo, Tile, Stone

- Terrazzo floors make fine sub-floors for gluing wood flooring down as the terrazzo is ground flat and smooth during its installation process. Remember, to remove any terrazzo sealers or wax before starting the wood installation. Clean the terrazzo with a strong stone or tile cleaner, and then sand it using a buffer with 12 or 16 grit sandpaper discs.
- Ceramic tile floors that are sound well bonded and flat make excellent sub-floors. Grout lines can be filled by skim coating and “pillowed” tile can be floated using a self-leveling underlayment. Abrade all ceramic or stone floors before installing wood flooring. Soft clay type tile such as Spanish tiles should be roughed up using a buffer and 12 or 16 grit sandpaper, removing any surface sealer, and then skim coated with a self-leveling underlayment such as Mapei Ultraplan ([http://www.mapei.com/public/COM/products/501\\_ultraplan\\_gb.pdf](http://www.mapei.com/public/COM/products/501_ultraplan_gb.pdf)).
- Stone and marble should be clean free of sealers and all shine should be removed by grinding with a buffer as mentioned above.
- Note that it is much less labor intensive and therefore less expensive to the end user if existing hard surface floors are prepared and left down. Removing tile, marble, or stone is an expensive very messy procedure, which leave you with a sub-floor that will need extensive preparation before a wood floor can be installed on it.
- Do not install wood flooring over vinyl made with a urethane wear surface!