



Sub Floor Preparation

Flatness

To achieve the best installation, the following standard building sub-floor tolerances must be adhered to –

Plank Flooring: +/-3mm per 2 linear metres in all directions.

Parquet Flooring: +/-2mm per 3 linear metres in all directions.

Screed

Standard Screed

- Moisture content must be less than 3%.
- Relative humidity (ErH) less than 75% when tested with a BS 8203 hygrometer.

Anhydrite screed

- Moisture content must be less than 0.3%.
PLEASE NOTE: Heating systems and dehumidifiers must be switched off 48 hours prior to measurements being taken.

Hygrometer Testing

- This should be undertaken by your contractor or sub-floor specialist.
- A 16mm x 50mm deep hole should be drilled into the screed, taking care to avoid damaging the radiant underfloor heating, plumbing or any electrical cabling under the screed.
- Insert Protimeter humidity sleeve into each hole.
- Testing should be conducted every 5m² and recorded with a Hygrostick reader.

PLEASE NOTE: Fast dry / rapid set screeds & self-levelling compounds can reduce the time taken to achieve the correct moisture levels.

Timber Substrates

Plywood

- Substrates being installed over joists of 300mm centres must have a minimum thickness of 15mm.
- If installing over joists with a distance of 400mm centres, then a minimum ply thickness of 18mm must be used.
- The plywood should be screwed to the joists at 300mm centres.
- The contractor may need to add noggins if the distances stated cannot be achieved with existing joist layout/structure.



Chipboard

- Substrates must have a minimum thickness of 18mm, be glued via tongue & groove, and then screwed to the joists at 300mm centres.
- The contractor may need to add noggins if the distances stated cannot be achieved with existing joist layout/structure.

PLEASE NOTE: When using ply or chipboard, all sub-floor joints must be staggered. Single sheets must traverse all thresholds (such as doors), never jointed. Sheets must have a moisture content of less than 10%. Please consult the Root technical team if you plan on using a different substrate.

Regulating Radiant Underfloor Heating Systems

- We recommend the use of Digital dual sensing thermostats (air and floor temperature sensing) be with all radiant under-floor heating systems.
- Remote floor sensors must be calibrated to ensure that the surface temperature of the floor **does not exceed 27°C**.
- Typically, setting the UFH sensors to allow a maximum temperature of 32°C on the underside of the engineered wood boards, would regulate the maximum floor surface temperature (the topside of the plank) to 27°C when using a 20mm thick board. This will need adjusting if using a thinner/thicker board.

PLEASE NOTE: Remote floor sensors can fail. It is advised that two sensors are used every 10m². If the floor is not properly regulated you risk damaging the engineered wood flooring.

Under-Floor Heating Operation Guide Prior to Installing the Engineered Wood Flooring

- **Step 1** – Activate the underfloor heating system, and increase the temperature in daily increments of 5°C, ie. day one 5°C, day two 10°C, day three 15°C, until the maximum temperature has been reached.
- **Step 2** – The maximum temperature should be maintained for at least 48 hours. If a cement screed is being used, the temperature should be maintained until the correct screed moisture levels are achieved (see screed moisture requirements above).
- **Step 3** – The underfloor heating should then be cooled down at the same rate ie. 5°C per day.
- **Step 4** – Once the underfloor heating system has returned to its lowest level, switch the heating off for 48 hours.
- **Step 5** – After the 48 hour period mentioned in Step 4, re-activate the underfloor heating and again increase the temperature by 5°C per day until the installation surface temperature of the sub-floor has reached 15°C. This 15°C should be maintained throughout the installation period.

PLEASE NOTE: Only operate the heating system in frost mode until the floor protection has been fully removed.

Atmospheric Conditions

For wood floor acclimatisation:

- For one week prior to and during installation, the atmospheric relative humidity (RH) should not fall below 40%, or exceed 60%.
- Room temperatures must remain between 15°C-22°C.
- After installation, the same 40-60% relative humidity must be maintained.
- Underfloor heating must be properly regulated to ensure the surface temperature of the engineered wood floor does not exceed 27°C.