



INSTALLATION SPECIFICATION

Royal Oak Floors are made of either European Oak, French Oak, Holly Oak and Teak which are bonded onto an engineered base to ensure stability. They are all pre-finished in an extensive range of colours. Various thicknesses are available. In our Architect Collection we supply 10mm, 15mm or 20mm and in the Artisan Collection 10mm, 15mm, 18mm and 20mm thicknesses are available depending on the product chosen. Colour variation occurs with all natural timbers; however most of our finishes have greater tonal variation than stained finishes due to the chemical processes used to achieve the colour. The quality of our boards is exceptional in appearance and trueness. High quality engineered floors can be laid without restrictions that apply to a solid product. For example; shrinkage and movement is greatly reduced. We recommend qualified floor layers be used to install our floors (Please contact Harper and Sandilands for recommended installers).

Pre-Installation Considerations

Wastage allowances: We recommend a minimum wastage factor of 10% and up to 15% for darker floors or even up to 20% for herringbone pattern.

Moisture & Environment: We suggest installers refer to the AFTA (Australian Timber Flooring Association) Engineered Flooring industry standards technical publication (Version 1 – Feb 2012), for moisture content & humidity guidelines prior to installing the timber floors.

Prefinished Boards: Our boards require no additional finishing treatment once laid, however care must be taken to remove glue residue during installation. Protection of the floor from damage is also important from other trades and traffic (refer to post installation considerations on page 3.)

Removal of Glue Residue: It is vital that all glue residues are removed immediately after laying each pre-finished board. If using "Bostik Ultraset SF" (recommended) to glue down, use the "Bostik Wipes" or a solvent suitable to the glue being used. Always test solvents first on an off-cut to establish that the solvent does not affect the colour or finish. Use a damp cloth to wipe away any solvent residue. Especially important on dark colours!

Staircases: Prior to installation of the floor we recommend a lay out of all stair nosings. Match nosing's to boards as you are opening packs to lay the floor. Select the closest tone possible to avoid an unacceptable contrast on a completed stair tread and riser. Note that it is acceptable to have some variation in a set of stairs. Not every nosing will match every tread and riser but by selecting early helps.

Using a block to install: Avoid being called back due to splintering issues! Care must be taken fitting boards together to avoid bruising the leading edges that cause splintering. Do not hit the edges of boards with a rubber mallet, use a wooden or nylon block to knock boards together by hitting the board against the tongue side not the groove. Bruised edges can be hard to spot on completion of the job but once a bruise has been washed a few times the timber will fatten and mops can then lift the splinter up and personal injury to bare feet can occur. If you have created a bruise, carefully cut it out with a knife then sand it smooth. Note all engineered boards can bruise the thinner the board the easier it is to bruise. Please avoid.

Installation Methods

Installation over a concrete slab:

- **Preparation of the slab:** The concrete must be structurally sound, dry (no more than 5.5% moisture content), level and cleaned of waxes, adhesives dust etc. Slabs must be level with no more than a 3mm deviation over a 3 metre radius. If deviations are greater than above, use a self-levelling compound (e.g Ardit) or grind the slab to level the surface within the above tolerance. It is important to consider the possible risk of sub slab water ingress from surrounding areas. A relative humidity & moisture content reading is required prior to installation; please document readings for your records. If moisture content is more than 5.5%, please contact us for further advice.
- **Installation of boards by direct sticking the boards to the slab:** Over a prepared slab (see above re: slab preparation). Glue the boards with Bostik Ultraset SF to the slab using a 4-6mm notch trowel. Spot weight across the floor and weight any hollow or drummy areas to ensure floorboard and subfloor contact.
- **Installation of boards onto ply over concrete slab:** The minimum thickness of ply which can be used over a slab in order to secret nail is 9mm. Over a levelled slab lay thick polythene sheet as a moisture barrier. Overlap each sheet by 150mm and attach the overlaps using a 50mm wide double sided tape. Lay the ply over the polythene sheet in the opposite direction (cross laminate) to the intended direction of the floor, for example; place the long length of the ply perpendicular to the direction of the boards. Attach the sheets to the slab using pre-drill sleeve pins only, at a rate of 28 pins per 2400mm x 1200mm sheet. Level ply as necessary by plane. Rough sand ply and glue using Bostik Ultraset SF applied in either a snake pattern individually to the back of the board or applied by 4-6mm notch trowel to the ply. Secret nail every 100-200mm.
- **Installation of boards by direct sticking to slab with acoustic matting:** The matting system is a requirement in multi-residential developments to reduce noise transfer. We suggest the use of **ImpactaMat** which is available in 3mm & 5mm thicknesses or **Regupol** which is also available in various thicknesses. Over a prepared slab (see above re: slab preparation) The matting will need to be applied to the slab with Bostik Ultraset SF using a 4mm notched trowel and allowed to dry to the manufacturer's specifications. Glue the boards directly to the matting with Bostik Ultraset SF also using a 6mm notched trowel. Spot weight across the floor and weight any hollow or drummy areas to ensure floorboard and subfloor contact.
- **Underfloor Heating Options:** In-slab and above-floor heating systems can be used under our 20mm or 10mm thickness Royal Oak Flooring. In-slab heating uses either electric or hydronic heating elements which are embedded in the slab. If using in-slab heating we recommend our direct stick to slab method (above). **It is vital that any underfloor heating system be fitted with a cut-off thermostat set no higher than 25 degrees Celsius when measured under the timber flooring.** Irreparable damage to wooden floors occurs if it is subjected to temperatures above 25 degrees. It is important that the total timber thickness is no greater than 20mm otherwise the insulating properties of the timber reduce the effectiveness of the heating system. Any air gaps between the boards and the heating system should be avoided, hence why spot weighting across the floor is very important. Even heat distribution is vitally important as hot spots can cause greater board movement (shrinkage or cupping) in some areas of the floor compared to others. Likewise, seasonal operation of the system can cause some gapping or board shape changes. It is best to run the heating system prior to install for around 2 weeks to ensure slab dryness. Subfloor temperature should be checked prior to install and should not exceed 25°C. Relative humidity should be in the range of 45 to 60% at a room temperature of 20°C. Then turn off the heating for at least two days where you can then install the flooring as per above. Once completed, gradually turn the heating up in stages over a period of 10 days in increments of say 2°C per day then maintain at desired level for 2 weeks ensuring that it does not go over 25°C. Gradually increasing and decreasing the temperature for operational use will help the timber to acclimatise and minimise disturbance to the floorboards.

Installation over structural timber flooring or existing timber strip flooring:

- **Installation over structural timber flooring (eg. Chipboard or Yellow Tongue):** Rough sand the timber substrate then glue using Bostik Ultraset SF applied in either a snake pattern individually to the back of the board or applied by 4-6mm notch trowel to the ply. Secret nail every 100-200mm.
- **Installation over existing timber strip flooring:** It is important to ensure that existing floors are sound and free of rot etc prior to installation of new timber over top. If running the boards in the opposite direction to the existing timber floors, the boards can be glued and secret nailed directly to the substrate. If installing in the same direction as existing flooring, a 4mm ply must be pinned down over the existing floor to create cross lamination. This minimises movement between the existing timber floor and new timber floor. Rough sand ply and glue using Bostik Ultraset SF applied in either a snake pattern individually to the back of the board or applied by 4-6mm notch trowel to the ply. Secret nail every 100-200mm.

We do not suggest the installation of our boards directly over battens, bearers & joists, or as a floating floor. Please call us to discuss further if you have any questions.

Installation for wall or ceiling applications:

- **Important considerations for wall & ceiling applications:** Our boards can be used in wall or ceiling applications. We have solid oak mouldings available for all of our Architect Collection colours for use in conjunction with our boards. 20x20x1900mm Corner Moulds are available to suit the 20mm boards and 40x6x1950mm cover strips are available for use on shelving, furniture, and cabinetry or for finishing exposed edges.
- **Installation of boards onto walls & ceilings:** It is important the area be sheeted out with a minimum 9mm ply in order for the boards to be glued and secret nailed. Rough sand ply and glue using Bostik Ultraset SF applied in either a snake pattern individually to the back of the board or applied by 4-6mm notch trowel to the ply. Secret nail every 100-200mm. Gluing and secret nailing onto ply ensures that boards are firmly fixed and will not be subject to 'sagging' where the cut end joins are, especially on ceilings.

Post-Installation Considerations

Caulking: As the boards are engineered, the need for expansion allowances is minimalized. We suggest a 3mm gap be left between boards & skirting. Caulk out the gap with silicone in a colour to match the floor or skirting.

Transitions: In most cases a 3mm aluminium flat bar is used as a transition between timber and other floor finishes.

After installation/Builders Clean: If dust is present, vacuum immediately, do not mop. Moisture can set plaster dust into the low grain of the timber making it very difficult to remove if not impossible. After all dust has been removed we have a Woca Intensive Wood Cleaner available if required.

Floor Protection during construction: It is preferred that the boards are laid as late as possible in the project to prevent the boards from being damaged by other trades as they are prefinished. Should further work need to be done on the project after installation has been completed it is essential that the floor be protected using a 2mm foam underlay and a 3mm or 4mm MDF sheeting over top that is securely taped together (do not apply tape to the finished floor) or other protection method.

Regular Cleaning and Maintenance: Our own recommended cleaning & maintenance range WOCA is available direct from our showroom or available for postage if the project is interstate. Please refer to the care instructions for Lacquered, Natural & UV Oiled or Driftwood and Pale Grey floors on our website under

specifications and installation for further information.

<http://www.royaloakfloors.com.au/installation-and-specification/>

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