

# RENOL1TE XPS Installation Guide



**UFH1**  
UNDERFLOORHEATING

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This document is not a definitive installation guide as it cannot cover all scenarios. This should be used in conjunction with manufacturers data/technical sheets for specific products incorporated within the installation. Refer to the UFH1 Installation guide for manifold installation, filling and venting, pressure testing, commissioning etc.

### **Subfloor**

The installer should ensure that the subfloor is suitable, strong and stable enough for the complete flooring build up/system. The floor must be flat, if you are in any doubt please contact us. The preparation must make the subfloor suitable to receive a flexible cementitious tile adhesive as per TTA guidelines. This may include over-boarding of timber floors, introduction of extra noggins to support the flooring, assessment of dryness of screeds, suitable priming of, e.g., calcium sulphate screeds, removal of adhesive residues, and smoothing of subfloors with appropriate smoothing compounds.

### **Suitable timber substrates include:**

1. Minimum 18mm exterior grade plywood fixed to solid and sound joists at 400mm centres.
2. Overlay of existing timber floors with 12mm minimum exterior plywood, which has been sealed on the edges and back, fully screw down the plywood at 300mm intervals ensuring all junctions are supported by noggins or joists.

### **Suitable solid substrates include:**

1. Fully cured concrete that must be at least six weeks old and thoroughly dry.
2. Solid screeds that have fully cured in relation to thickness as per manufacturers guidelines.

For any substrates, such as power floated concrete, calcium sulphate screeds, not listed above please seek manufacturers advice as to priming recommendations.

### **Installation**

1. The floor must be free of contaminants, dirt, grease, dust etc.
2. Loose lay the XPS boards across the floor paying attention to where the pipe runs will be and/or the CAD design (if supplied).



3. For areas where pipe is close together, it may be advisable to leave these areas free of boards and complete when the pipe is predominantly fitted. For these areas, use grip rails (if supplied) and/or board offcuts etc.



4. Once you are satisfied that the boards are in the correct position for the pipe, number the boards on the upper face to identify the position of each board. This will help when fitting the boards in place after priming etc.
5. Prime the substrate using Ultra Tile Fix Pro Primer/MSP or equivalent. The primer should be diluted 3 parts water to 1 part primer and allowed to fully dry, which usually takes around 1-2 hours depending on conditions
6. Prime the underside of the boards with Ultra Tile Fix Pro Primer/MSP or equivalent bonding primer to the product instructions. This should be applied by brush or roller in a thin film. Allow to thoroughly dry to a clear film ensuring primed face does not come into contact with other boards, walls or subfloor until it is ready to be re-fixed into place.
7. When the primer on the substrate is dry, apply Mapei Ultrabond Eco 380 Flooring adhesive or Ultra Tile Fix Proflex SP adhesive to the subfloor using a notched trowel to give a minimum 2mm (Mapei) or 3mm Pro Flex) adhesive bed. Fix the boards in place, primed side down, into the adhesive and ensure compression of adhesive ridges, ensure full compression of the adhesive to give a void free full adhesive bed.
8. We recommend the use of screws and washers to fix the boards on timber substrates where needed, fixed at every 300mm. Allow to cure for approximately 4 hours to ensure the adhesive has gone through its initial set before carrying out any further works.

9. Pipe work may be fitted into the boards once they are all secure. We recommend, if at all possible, that this is fitted the day after priming/adhesive is completed to allow the boards to settle and adhesive to dry fully.



10. If there's a point where the pipe isn't sitting flush in the groove, use a pipe clip and cut it into the board. The board can be cut with a trimming knife or hot wire and material removed to create pipe grooves.



11. 'Blank' boards can be used for areas where UFH is not used.



12. Use grip rails where pipe congests near the manifold and we recommend the void is filled with levelling compound before floor coverings are fitted.



### **Floor coverings**

We recommend that the whole area is covered with a minimum of 5mm levelling compound. Some laminate, engineered wood and solid wood flooring can be fitted over the boards and it is the responsibility of the flooring supplier/installer to ensure the XPS is a suitable substrate. For luxury vinyl tiles, the installer would usually use 6mm of levelling compound and it is the responsibility installer to ensure the product is suitable

The UFH system must be pressure tested before any floor covering is fitted.

### **Installation of tiles:**

1. Prime the surface of the boards/pipe using Ultra Tile Fix Pro Primer/MSP or equivalent. This should be applied by brush or roller in a thin film. Allow to thoroughly dry to a clear film.
2. Apply Ultra tile Fix Pro Level Two or Pro Level Rapid levelling compound over entire floor area, making sure all voids and gaps are completely filled. The levelling compound should cover the board with a 5mm layer on top.
3. Once the levelling compound is fully dry, to the manufacturers' specification, prime the surface using Ultra Tile Fix Pro Primer/MSP or equivalent. Allow to thoroughly dry.
4. Fix the tiles using Ultra Tile Fix Pro Flex SP adhesive (unless a specific adhesive for the tiles is recommended). Ensure full compression of the adhesive to give a void free full adhesive bed. Allow the adhesive to cure for a minimum of 4 hours.
5. Grout the tiles using Ultra Tile Flex Joint grout (unless a specific adhesive for the tiles is recommended). Allow to fully cure before walking on.
6. The Underfloor heating system should not be brought into service for at least 14 days or other time frame specified by the adhesive/grout manufacturer. After this time the water temperature should be brought up gradually by 5°C per day to the maximum working temperature (normally 45°C, flow temperature).