

FORTIS LITE

V1.4 – October 2026

Fortis LITE is a premium-grade EPS board offering a compressive strength of 400 kPa. Its high density construction provides exceptional rigidity, making it suitable for direct tiling and compatible with most other floor finishes. Each board is finished with a 200-micron foil layer, designed to enhance heat distribution across the surface. The boards can easily be cut with a knife, ensuring straightforward and efficient installation.

PRIMARY SYSTEM COMPONENTS

FORTIS LITE 16MM BOARD

- Board dimensions: 1200 x 600 x 16mm
- Pre-grooved to accept 12mm pipe
- 120mm pipe spacing (centre to centre)
- Includes pre-routed system channels with integrated returns

12MM PE-RT PIPE

- Available coil lengths: 120m & 200m
- Pipe specification: 12 x 1.4mm
- Highly flexible construction for smooth handling and installation
- Includes an EVOH oxygen barrier for system protection



BENEFITS

- Lightweight construction for efficient on-site handling and placement
- Suitable for direct tiling
- Close pipe centres provide higher heat output
- Compatible with levelling compounds applied over the surface
- Ideal for use on suspended floors
- Simple to modify on-site using a router or knife

FEATURES

- High-density polystyrene boards (400 kPa compressive strength)
- Pre-routed channels designed for 12mm pipe
- 1200 x 600mm board size
- 200-micron foil layer for efficient heat transfer
- All-in-one panel design - no separate feed or return panels required

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SUBSTRATE REQUIREMENTS

It is essential that the existing subfloor is level, stable and free from debris before installation. Any unevenness or movement may prevent the panels from sitting flat, which can lead to damage of the boards, pipework, or finished floor covering. The list below outlines our recommended suitable subfloor types. If your construction is not listed, please contact us on **01245 227630** to confirm suitability before proceeding.

- Solid concrete floors that have fully cured for a minimum of 6 weeks and are completely dry
- Screed floors where the manufacturer's recommended curing period has been fully observed
- Existing screed, tiled or concrete floors that are level; If uneven, a suitable levelling compound may be applied, provided it is fully cured before installation of the UFH
- Timber floors where the floorboards are level, securely fixed to the joists, and show no movement when walked on



All installation guidance in this document is based on the use of approved Mapei products. Other manufacturer's materials may also be suitable; however, you must confirm their compatibility with both the installation process and the bonding of polystyrene panels to the subfloor. Requirements may vary, including the need for different primers or adhesives. You must also ensure that any chosen tile adhesive is suitable for bonding to foil-backed polystyrene boards when installing tiles.

Multipipe cannot accept liability for any damage to floor surfaces resulting from the use of incorrect or incompatible products.

This document is intended solely to provide guidance for the installation of the Fortis LITE system. Installers must consult the relevant manufacturer's technical documentation for levelling compounds and associated subfloor preparation processes to ensure full compliance with product-specific requirements, and must follow the levelling compound manufacturer's guidelines to prepare the surface correctly for the final floor covering.

INSULATION POSITIONING

For optimal efficiency, we recommend installing the system over an insulated floor. As this is a bonded system, insulation must not be placed above the subfloor during installation. The system panels must be bonded directly to a structural subfloor to ensure correct performance.

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INSTALLATION FOR BONDED SYSTEM

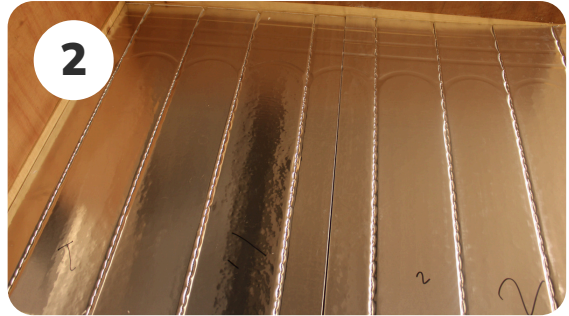
(Recommended for tile, bonded vinyl, and bonded wood systems)

1



Ensure the subfloor is dry, clean, and free from any debris. Fill any holes or uneven areas with an appropriate levelling compound. If adhesives are to be used, apply a suitable primer for that adhesive and allow it to dry completely.

2



Using the supplied UFH layout drawing, position the panel loosely in the orientation indicated. Complete all necessary cuts to ensure the boards fit correctly.

Top Tip: Number each board within the room to maintain clear identification of its location during installation.

3A



Use the supplied impact adhesive (where ordered) in accordance with the manufacturer's instructions on the container. If an alternative spray adhesive is used, confirm that it is fully compatible with both the subfloor and the polystyrene panel before application.

3B



Alternatively, for more uneven subfloors, apply Mapei Keraquick S1 adhesive using a notched trowel to achieve a minimum 3mm adhesive bed. A greater depth may be required where the substrate is not sufficiently level. If irregularities exceed 2-3mm, a suitable levelling compound should be applied prior to installation. Allow the adhesive to fully cure before proceeding.

4



Lay the boards onto the adhesive and press them firmly into the bed. As you progress across the floor, ensure each panel is fully compressed into the adhesive layer. Continuously check that the panels remain level and that the pipe channels align.

5



If installing onto a timber subfloor, we recommend using large flange-head fixing screws at 300mm centres across the entire board in addition to the adhesive. Allow the adhesive to cure for a minimum of 3 hours (temperature dependent), but ideally leave it overnight to ensure full curing.

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INSTALLATION FOR BONDED SYSTEM

Recommended for tile, bonded vinyl, and bonded wood systems



Sweep all panels to ensure they are completely free from debris, paying particular attention to the pipe channels. Before commencing pipe installation, ensure no other trades are working in the room to prevent contamination of the panels.



Referring to the UFH layout drawing, install the designated pipework for each room. Using either a pipe decoiler or by hand, lay the pipe into the preformed pipe channels.



If panel modifications are required, we recommend using a knife or a router to create any additional channels.



Once the system has been fully installed, refer to our UFH Installation Guide for the correct procedures on filling and pressure testing.

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LAYING WITH LEVELLING COMPOUND

(Skip if tiling directly)



If a levelling compound is to be applied, prime the surface using Mapei Eco Prim Grip T, applied with a brush or roller, ensuring full coverage of both the boards and the pipework. Allow the primer to dry for a minimum of 60 minutes before proceeding.



Using Mapei Ultraplan Renovation Screed 3240, mix and apply the levelling compound to the depths specified in the table on Page 5. Once fully cured, tiles may be bonded using Mapei Keraquick S1 tile adhesive. Applying a levelling compound will increase the overall floor height but provides additional protection to the pipework and system.

Note: a levelling compound is not required when installing tiles. but maybe recommend by the tiler

THICKNESS OF LEVELLING COMPOUND REQUIRED

FLOOR FINISH	MINIMUM THICKNESS (MM)
Tiles / natural stone*	6mm
Vinyl (Amtico/Karndean etc.)	10mm
Engineered wood or laminate (bonded down)	10mm
Carpet (tog rating <2.5 inc. underlay)	10mm

Note: These levelling compound thicknesses are recommended values; however, always consult the floor-finish manufacturer, as their requirements may vary.

*Although direct tiling of the system is possible it maybe a recommendation from the flooring manufacturer to add a levelling compound if so please follow the above recommendations.

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DIRECT TILING TO BOARDS



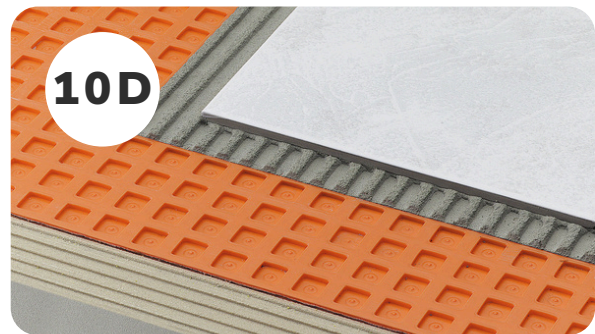
Fix the tiles using Mapei Keraquick S1 combined with Mapei Latex Plus additive. Ensure all pipe channels and any voids surrounding the pipework are fully encapsulated with tile adhesive. Use a notched trowel to achieve full coverage and ensure proper adhesion between the panel and the tile.



Lay the tiles and allow a minimum of 24 hours for the adhesive to dry before proceeding.



Once the adhesive has cured, grout the tiles using Mapei Ultracolor Plus. Allow the tiled surface to fully cure before permitting foot traffic. All movement joints must be filled with Mapei Mapesil AC for ceramic and porcelain tiles or Mapei Mapesil LM for natural stone. Allow the tiled area to cure for a minimum of 10 days before commissioning the heating system, and follow the heat-up procedure detailed in the main UFH Installation Guide.



If a decoupling membrane is to be installed between the UFH boards and the tile finish, follow the procedure outlined in Section 10a using Mapei Keraquick S1, then fix the membrane into the adhesive bed. Once the adhesive has fully cured, tiling may proceed in accordance with the tiler's standard practice. Ensure that all adhesives used are suitable for underfloor heating systems.

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DIRECT BONDED TIMBER FLOOR

Begin by completing the preparation steps under "Installation for Bonded System" (Page 3-4).

Check with your wood floor supplier whether the flooring can be bonded directly to the UFH panels. If a separation layer is required, refer to the instructions under "Laying With Levelling Compound."

Our recommended adhesive for both methods is Mapei Ultrabond S955 1K. Alternative products may be suitable, but their compatibility must be confirmed before use.

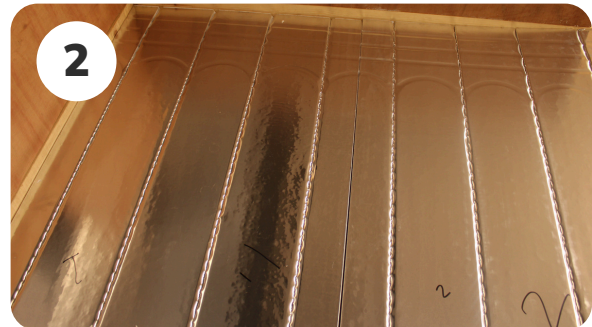
Please note: For all wood flooring installations, we recommend fitting a floor sensor set to a maximum of 27 °C, positioned between two pipes within the UFH panel.



INSTALLATION METHODS FOR FLOATING FLOOR SYSTEMS (Recommended for laminate & floating engineered flooring)



Ensure the subfloor is dry, clean, and free from any debris. Fill any holes or uneven areas with an appropriate levelling compound. If adhesives are to be used, apply a suitable primer for that adhesive and allow it to dry completely.

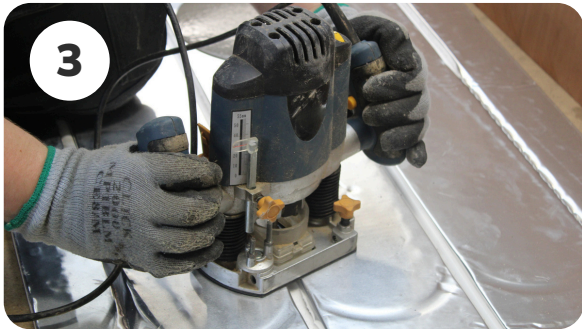


Using the supplied UFH layout drawing, position the panel loosely in the orientation indicated. Complete all necessary cuts to ensure the boards fit correctly.
Top Tip: Number each board within the room to maintain clear identification of its location during installation.

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INSTALLATION METHODS FOR FLOATING FLOOR SYSTEMS

(Recommended for laminate & floating engineered flooring)



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Referring to the UFH layout drawing, install the designated pipework for each room. Using either a pipe decoiler or by hand, lay the pipe into the preformed pipe channels.



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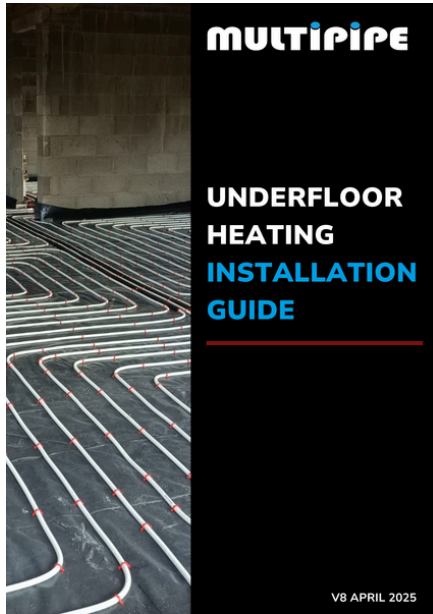


Allow the floor finish to acclimatise to the internal room temperature for a minimum of 24 hours, as dimensional changes such as shrinkage may occur depending on the ambient conditions.



Before installing a laminate or engineered wood floor, we recommend using an appropriate underlay to aid heat distribution and minimise system noise. The underlay must be approved for use with underfloor heating systems.

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After the system has been installed, refer to our UFH Installation Guide for the correct procedures on pressure testing and commissioning the system.