

# Thermal Insulation Board Fixing Instructions

**Heat Mat**  
Underfloor Heating

These instructions are for all TTB products including 4, 6, 10 and 20mm thermal underfloor heating insulation boards.

Our UK manufactured thermal insulation boards are ideal for insulating your floor and reducing the heat-up time and increasing the efficiency of your heating system. The product is suitable for use beneath any of our underfloor heating systems and the boards can pay for themselves, through reduced heating bills, in as little as 3 years when used on concrete floors in badly insulated properties.



PLEASE NOTE THAT THE SIMPLEST WAY TO TRIM BOARDS IS TO CUT THE CEMENTITIOUS LAYER WITH A SHARP BLADE ON ONE SIDE OF THE BOARD. THE BOARDS CAN THEN BE SNAPPED IN HALF.

## Fixing to Wooden Floors

**Fixing with adhesive.** If fixing the boards to a wooden base with tile adhesive, the floor base must be structurally secure for its intended use. If your floor base is suitably secure then please follow the installation instructions for fixing to concrete floors. If the floor is not structurally secure then it can be secured with 18mm ply or similar before following the installation method using tile adhesive. Alternatively the floor can be secured by mechanically fixing 6mm or 10mm boards which can save build height and installation time. 10mm boards are preferred for this purpose as they offer greater strength and board should be laid in a brick-like pattern.

### Fixing with mechanical fixings (6 & 10mm boards only).

Our 6 and 10mm insulation boards can be used to secure floor boards by fixing them with approximately 21 screws per 1200mm x 600mm board at 300mm centres; a 35mm fixing washer should be used under each screw head and the screw tightened until the washer bites into the board to provide a firm hold. The correct length screw should be used to allow it to pass through the board and into the wooden base beneath. The boards should be laid in a brick-like fashion. The base should be checked to ensure there are NO electrical cables or pipework beneath that may be damaged by the screws when affixing the boards.

## Fixing to Concrete and Floors

Prior to laying the boards the floor base should be cleared of any traces of loose material and be level and dust free. If the floor is of new concrete or screed it is important that it is correctly cured and fully dried before treating with a suitable primer that is compatible with your chosen tile adhesive. The thermal insulation boards should be fixed in a brick-like pattern using a flexible rapid set cementitious tile adhesive; it is important that solvent based or ready mixed adhesives are NOT used.

Apply a bed of tile adhesive to the base using an 8mm square notched trowel. If an 8mm notched trowel is not available you can use a 6mm square notched trowel held at an upright angle to increase the height of the adhesive bed. Each board should be fully bedded down to eliminate voids beneath and care should be taken to ensure there are no gaps between the boards. When laying the tile adhesive ensure you DO NOT allow a dry skin to form as this will prevent the adhesive bonding securely to the face of the insulation board.



Any slight depressions or gaps in the concrete floor can normally be taken up within the thickness of the tile adhesive. Thermal insulation boards must not bridge movement joints within the sub floor. Any movement joints must be maintained throughout the construction including the boards and final floor covering. Maintain and seal all movement joints appropriately.

## Before installing your underfloor heating system

Before starting to install your underfloor heating system you **must tape all joins between the boards with reinforcement tape**. After the tape has been laid you should prime the boards with a primer suitable for use with the tile adhesive or levelling compound you have chosen. Tape is available in a 90m roll to cover 36m<sup>2</sup> of boards.

## Installing underfloor heating mats/cables onto Heat Mat Thermal Insulation Boards

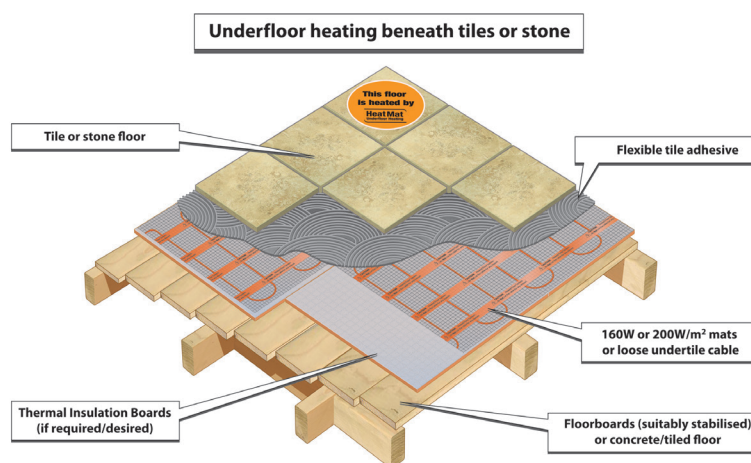
Once the insulation boards have been laid and all adhesives have been allowed to dry fully, the heating mats/cables can be installed taking care not to damage the heating element.

If tiles are to be laid on top, the underfloor heating system should be fully encapsulated within a flexible tile adhesive.

Alternatively, the system can be encapsulated within Heat Mat flexible self-levelling compound or a similar flexible latex compound and allowed to dry fully, before bedding in the tiles with a flexible adhesive.

If the final floor covering is carpet, bonded wood or vinyl, the heating system must not have an output higher than 160Watts per/m<sup>2</sup> and the heating cables must have a minimum covering of 12mm of levelling compound, which must have been allowed to dry fully prior to laying the final finish.

All floor coverings should be checked with the manufacturer to ensure they are suitable for use with underfloor heating, and the full fitting instructions supplied with the heating system should be read prior to installation.



### Stocked Product options for Heat Mat Underfloor Heating Thermal Insulation Boards

Product Code	Description	Pack Size	Dimensions (L/W)	Coverage	U Value (w/m <sup>2</sup> )
TTB-004-4PCK	4mm Concrete Coated Thermal Insulation Boards	4 Boards	1200mm x 600mm	2.88sqm	3.75
TTB-004-5PCK	4mm Concrete Coated Thermal Insulation Boards	5 Boards	1200mm x 600mm	3.60sqm	3.75
TTB-006-5PCK	6mm Concrete Coated Thermal Insulation Boards	5 Boards	1200mm x 600mm	3.60sqm	3.05
TTB-006-6PCK	6mm Concrete Coated Thermal Insulation Boards	6 Boards	1200mm x 600mm	4.32sqm	3.05
TTB-006-7PCK	6mm Concrete Coated Thermal Insulation Boards	7 Boards	1200mm x 600mm	5.04sqm	3.05
TTB-006-8PCK	6mm Concrete Coated Thermal Insulation Boards	8 Boards	1200mm x 600mm	5.76sqm	3.05
TTB-010-4PCK	10mm Concrete Coated Thermal Insulation Boards	4 Boards	1200mm x 600mm	2.88sqm	2.23
TTB-010-5PCK	10mm Concrete Coated Thermal Insulation Boards	5 Boards	1200mm x 600mm	3.60sqm	2.23
TTB-010-6PCK	10mm Concrete Coated Thermal Insulation Boards	6 Boards	1200mm x 600mm	4.32sqm	2.23
TTB-010-7PCK	10mm Concrete Coated Thermal Insulation Boards	7 Boards	1200mm x 600mm	5.04sqm	2.23
TTB-020-0004	20mm Concrete Coated Thermal Insulation Boards	5 Boards	1200mm x 600mm	3.60sqm	1.33
TTB-111-0090	Thermal Insulation board reinforcement tape - 90m roll suitable for 36m <sup>2</sup> of boards				
TTB-111-0090	Screws and washers for fixing 6mm and 10mm insulation board onto floorboards (21 required per board)				

Other sizes are available on special order, please contact us for details on 01444 247020 or email: [sales@heatmat.co.uk](mailto:sales@heatmat.co.uk)



Made in the UK

For further information please check the fitting instructions supplied with your heating system or Contact Heat Mat's Technical Support Team on: 01444 247020 for installation advice.

[www.heatmat.co.uk](http://www.heatmat.co.uk)

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