



Insulation Boards



## Heat Mat Insulation Boards

### Structural, concrete-faced thermal insulation boards

Low profile structural insulation boards designed to minimise downward heat loss, improving the efficiency and warm up time of any underfloor heating system. When 10mm boards are used beneath a 200W system the floor will normally heat up in as little as 20 minutes and they add very little build height for a great energy saving measure.

The boards are simple to install either by fixing with screws and washers to secure wooden floor bases, or with tile adhesive for use on concrete, tile and similar floors. 6mm boards are particularly suitable for areas where build height is at a premium and 20mm boards offer an excellent trade off between build height, cost and energy efficiency.

- Improves the warm up time and energy efficiency of all underfloor heating systems
- All thicknesses of board are 1.2m x 0.6m ensuring they are lightweight and simple to transport.
- A simple one person job to install
- Concrete faced structural boards designed to withstand 30 tonne/m<sup>2</sup> – will not crush like uncoated boards do
- Use instead of ply boards to secure floor boards for tiling
- Excellent soundproofing and water resistant qualities. Ideal for creating a wet room

Product code	Coverage per pack	Thickness	U Value (W/m <sup>2</sup> )
TTB-006-0006	5.76m <sup>2</sup>	6mm	3.05
TTB-006-5PCK	3.60m <sup>2</sup>	6mm	3.05
TTB-006-6PCK	4.32m <sup>2</sup>	6mm	3.05
TTB-006-7PCK	5.04m <sup>2</sup>	6mm	3.05
TTB-006-8PCK	5.76m <sup>2</sup>	6mm	3.05
TTB-010-4PCK	2.88m <sup>2</sup>	10mm	2.23
TTB-010-5PCK	3.6m <sup>2</sup>	10mm	2.23
TTB-010-6PCK	4.32m <sup>2</sup>	10mm	2.23
TTB-010-7PCK	5.04m <sup>2</sup>	10mm	2.23
TTB-012-0004	4.32m <sup>2</sup>	12.5mm	1.91
TTB-020-0004	4.32m <sup>2</sup>	20mm	1.33
TTB-030-0003	2.88m <sup>2</sup>	30mm	0.95
TTB-040-0002	2.16m <sup>2</sup>	40mm	0.74
TTB-050-0001	1.44m <sup>2</sup>	50mm	0.60
TTB-060-0001	1.44m <sup>2</sup>	60mm	0.51
TTB-070-0001	1.44m <sup>2</sup>	70mm	0.44
TTB-111-0020	20m of TTB reinforcement tape suitable for 12m <sup>2</sup> of boards		
TTB-111-0090	90m of TTB reinforcement tape suitable for 54m <sup>2</sup> of boards		
TTB-111-1000	50 x 25mm screws and washers for securing 10mm boards onto floorboards		



# Heat Mat

## Underfloor Heating

Call 01444 247020  
to find out more or  
visit our website at  
[www.heatmat.co.uk](http://www.heatmat.co.uk)

### Insulation Board Features

- Improve the efficiency and warm up time of your underfloor heating system
- Allows insulation to be located directly beneath your underfloor heating in the most energy efficient position
- Minimal increase in build height
- A wide variety of sizes are available to suit your requirements
- Simple to install and can be cut with a knife
- Excellent soundproofing characteristics
- Virtually waterproof; will not warp or decay in contact with water
- Significantly lighter than plasterboard or plywood
- Minimises heat loss through floors which can be as much as 10% of a building's overall heat loss
- Can pay for themselves in electricity savings in as little as three years in badly insulated rooms
- Structural insulation board guarantees no floor movement - design to withstand a load of more than 30 tonne/m<sup>2</sup>
- Made in the UK

### Compatible with:



Heating mats



Undertile heating cable



FlexHeat cable



7mm heating cable



Underlamine insulation boards



### Selecting the correct boards

To start with you will need to decide on the thickness of boards that you should use. The thicker the insulation board the more benefit you will experience, however this is at the cost of build height. In most circumstances a 10 or 20mm board is ideal, however where build height is highly restricted a 6mm board can be used. Once you have decided on the height of the board you will use, you should order enough packs to cover the area of the floor you wish to install them on plus another 5% to allow for off cuts.

### General installation notes

The boards are supplied in simple to transport packs which can easily fit into the back of a normal hatchback car. The packs are light enough for one person to carry and the boards can easily be cut with a knife. The boards should always be laid in a chequer plate fashion (as with bricks in a wall) and once the boards are laid Heat Mat recommends taping up the joints between the boards with reinforcement tape to ensure a firm floor base.

### Installing onto concrete or tile bases

When installing the boards onto hard floors they are affixed with a standard flexible tile adhesive laid with a notched trowel. The sub-floor should be primed and once the primer has gone off the boards can be secured down with the tile adhesive in a bed a couple of mm thick.

### Installing onto floorboards or wooden bases (not 6mm boards)

10mm and thicker boards are suitable for securing wooden and chipboard floor bases and in these circumstances they are screwed down with at least

12 screws per board. Screws with 35mm washers should then be used to secure the boards at 300mm centres.

### Waterproofing in wet rooms

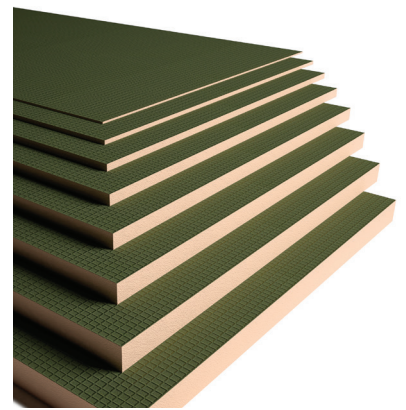
If the boards are being used in a wet room to provide the tanking system all joints should be waterproofed with a silicon sealant. The simplest way to do this is to run a bead of sealant along the edge of the board before it is laid and then push it up to the abutting boards to complete the seal. All joints must still be taped with reinforcement tape afterwards.

### Coated vs uncoated boards

Heat Mat thermal insulation boards are concrete faced which provides many benefits over uncoated non-reinforced boards. Non-coated boards are less expensive than coated boards, as they are simpler to manufacture and cost less to deliver due to their reduced weight, however in our opinion they are not suitable for use beneath tiles.

One of the main benefits of coated boards is they resist point loads so are not crushed during installation. They also prevent broken tiles and cracked grout if significant weight is placed on the finished floor, which can be a problem with uncoated boards. Coated boards provide Class O fire protection (uncoated boards offer no protection) and the concrete layer also helps the heat from the heating cables to spread providing an evenly heated floor.

The final, and perhaps most significant issue with uncoated boards, is that they often do not provide a good key to the tile adhesive which can lead to the floor delaminating.



### Structural Thermal Insulation Boards Technical Specification

Compressive strength	300kPa
Thermal conductivity to BS874	0.027 W/mK
Thermal conductivity to BS EN 13164 - 5 year test	0.031 W/mK
Water absorption	0.2% by volume
Density	36kg/m <sup>3</sup>
Flexural strength (transverse)	600kPa
Flexural strength (Longitudinal)	700kPa
Temperature range suitability	-50°C – +75°C
Fire resistance to BS 476 part 6,7 surface spread of flame	Class O

Thickness	U Value (W/m <sup>2</sup> )
6mm	3.05
10mm	2.23
12.5mm	1.91
20mm	1.33
30mm	0.95
40mm	0.74
50mm	0.60
60mm	0.51
70mm	0.44



### About Heat Mat

With more than 1,200,000m<sup>2</sup> of underfloor heating installed and 20 years' experience of the UK underfloor heating market and a wealth of knowledge on Scandinavian ice and snow melting systems, you can rely on Heat Mat to understand your needs and supply the products to satisfy your requirements.

This is why we are the Professional's Choice, the number one supplier of electric underfloor heating and ice and snow melting systems to the UK's professional installation market.



### Contact us

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## Underfloor Heating



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