

# Cement Coated Insulation Boards

## Overview

Warmup Insulation Boards are manufactured from water resistant extruded polystyrene, finished on both faces with a thin layer of fibreglass reinforced cement. They are available in a range of thicknesses, from 6mm to 50mm, to individual project requirements.

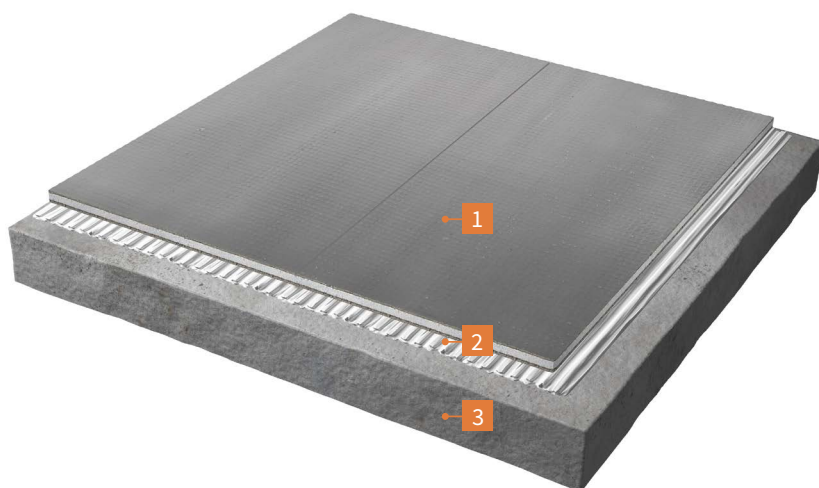
They are ideal for tile backing applications on both walls and floors, with the internal layer of insulation capable of supporting 30 tonnes per square metre. The 0.5mm thick cement coating provides an excellent surface for tile adhesive, plaster and smoothing/levelling compounds, with no priming required.

The low thermal conductivity of the insulation enhances the efficiency of underfloor heating systems, even when used over pre insulated sub floors. This is because they reduce the thermal mass of the floor, significantly reducing the amount of heat absorbed by the subfloor. This allows the underfloor heating system to warm the floor and the room up faster and ensures the floor cools down faster after use. By reducing the amount of time the room takes to warm up and cool down, the room can spend longer at its cooler set back temperature, reducing its heat loss.

The waterproof insulation panels are suitable for bathrooms and showers as well as dry rooms, allowing the same construction to be used throughout

### FLOOR CONSTRUCTION

- 1 Warmup Coated Insulation Board
- 2 Flexible Tile Adhesive
- 3 Subfloor



**Electric**  
Heating System

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**Warmup**<sup>®</sup>

The world's best-selling floor heating brand™

# Technical Data

TECHNICAL DATA - Insulation Boards						
PRODUCT CODE	INSBOARD6	INSBOARD (PK1)	INSBOARD20	INSBOARD30	INSBOARD40	INSBOARD50
THICKNESS - mm	6mm	10mm	20mm	30mm	40mm	50mm
WIDTH - mm	600					
LENGTH - mm	1250					
AREA - m <sup>2</sup>	0.75					
WEIGHT - kg (kg/m <sup>2</sup> )	2.2 (2.9)	2.3 (3.1)	2.5 (3.4)	2.8 (3.7)	3.0 (4.0)	3.2 (4.3)
THERMAL CONDUCTIVITY - W/mK	0.036					
THERMAL RESISTANCE - m <sup>2</sup> K/W	0.14	0.25	0.53	0.81	1.08	1.36
WATER VAPOUR PERMEABILITY (Sd) - m	0.6	1.2	2.7	4.2	5.7	7.2
COMPRESSIVE STRENGTH - kPa	300					
BOND STRENGTH - kPa	219					
SHEAR BOND STRENGTH - kPa	325					
MAXIMUM TILE WEIGHT - kg/m <sup>2</sup>	60					
THERMAL EXPANSION COEFFICIENT (FOAM CORE ONLY) - mm/m per °C	≤0.07					
WATER ABSORPTION (2 DAY IMMERSION)(FOAM CORE ONLY) - % by volume	≤1.5					
FIRE RATING - Class	E					
OZONE DEPLETION POTENTIAL - ODP	0					
GLOBAL WARMING POTENTIAL - GWP	<5					



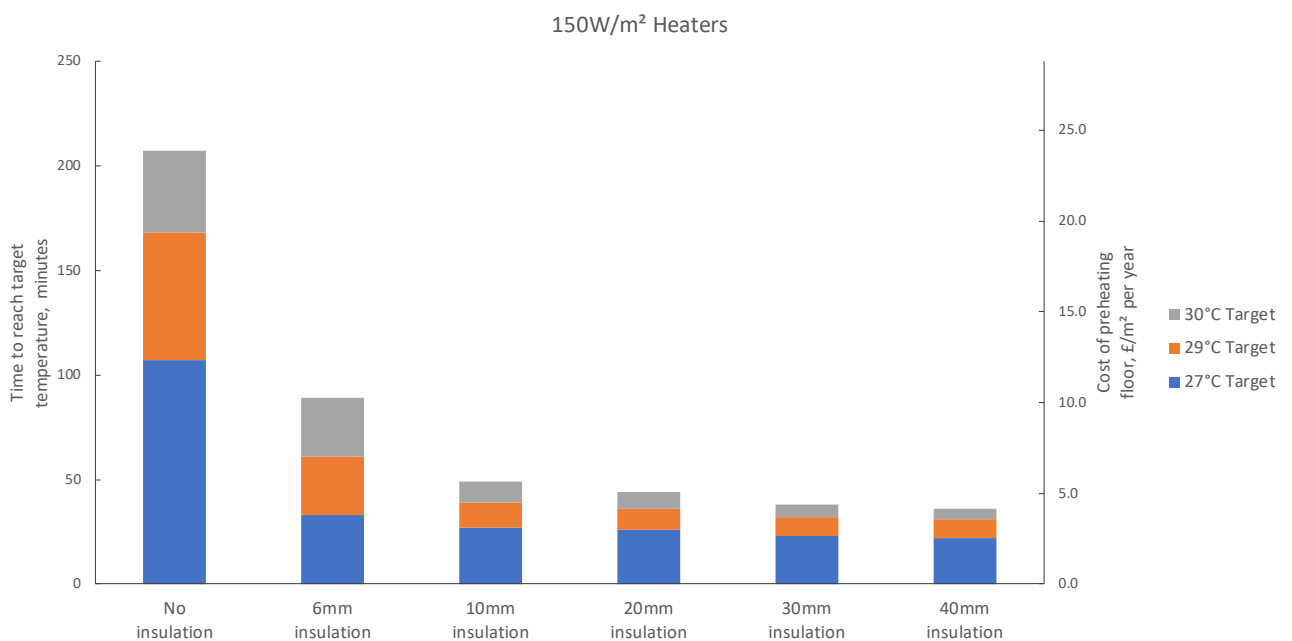
# Features

- Easy to cut and shape around fixtures with a knife or saw
- Comes in a range of thicknesses to suit floor and wall applications
- Can be fixed to solid or stud walls
- Excellent as internal wall insulation especially when compared to standard cement building boards and plaster boards
- Reduces heat loss and improves the underfloor heating systems response time
- **CE** marked for ultimate peace of mind
- Can be used to easily create a waterproof floors and walls in wet rooms, just by adding silicone sealant to the edges of the board before butting them tightly together
- High resistance to rot due to very low absorption rate

## INSULATION BOARD EFFECT ON PREHEATING TIMES

Warmup has conducted extensive testing of its electric underfloor heating systems when used in combination with its range of Cement Coated Insulation Boards. The tests consisted of a 75mm screed subfloor, heated with a 150W/m<sup>2</sup> under tile heating system. The range of Warmup Cement Coated Insulation Boards were each installed between the sub floor and the heated tiles with a reference construction that had none.

The chart below shows the response times and the resulting costs of preheating the floors from 18°C to three different temperature settings. Even just a 6mm board makes a significant improvement to system performance and provides savings that will quickly recover their initial purchase price.



\*Cost assumptions: 12.66p/kWh - system on twice a day, for 6 months (182 days) of the year.