

## Technical Specification

### Description

Pavatherm is a wooden fibreboard to DIN 68755 Part 1: Fibreboards for building constructions; Insulation material for thermal protection. The board does not contain any glue nor wood preservers.

Pavatherm is quality monitored by the FMPA Stuttgart and the Institute for Structural Biology, Rosenheim (IBR).

Pavatherm is an insulating fibreboard. Pavatherm is applied in roof constructions (inter beam and over beam constructions) and in wall constructions.

Boards are supplied in standard size of 1020 mm x 600 mm (thicknesses of 20, 30, 40, 60, 80, 90, 100, 120 mm), 1020 x 2050 mm (thickness of 40 and 60 mm) and 800 mm x 2050 mm (thickness of 80 mm). Typical density is 160 kg/m<sup>3</sup>.

The edges of Pavatherm insulation boards are straight.

Tests on the finished products are carried out to determine:

- Compression test at 10% compression
- Thermal conductivity
- Swelling in thickness
- Water penetration
- Bending strength
- Density
- Internal bond

### Delivery and site handling

The boards are delivered to site wrapped in polythene. Each pack bears the manufacturer's trade name, the DIN 68755 Part 1 identification, its properties according to DIN 68755 Part 1, the identification symbol of the quality monitoring FMPA Stuttgart and of the Institute for Structural Biology, Rosenheim (IBR).

The product must be stored dry and flat at the site. The boards must be applied dry. Care must be taken to avoid contact with solvents and fresh wood preservers.

The boards must not be exposed to open flame or other ignition sources.

## Design Data

### General

Pavatherm is effective in reducing the U value (thermal transmittance), in improving acoustic sound protection and summer heat protection (phase postponement). Pavatherm guarantees an active breathing housing. Pavatherm can be used in new and renovation buildings.

Pavatherm is applied in over beam and inter beam insulations as well as in timber construction walls. Pavatherm is not water-resistant. Therefore it must be protected with a water-resistant layer as Isolair "L" or a rigid underlay.

### Properties in relation to fire

The boards do not prejudice the fire resistance properties of the roof nor of the wall.

When properly installed the boards will not add significantly to any existing fire hazard. The boards will not present a toxic hazard.

According to DIN 4102 Pavatherm belongs to the material class B2.

### Moisture penetration

Moisture can penetrate the board. The board is not water-repellent.

### Water vapour penetration

Pavatherm is a fibreboard with a very low vapour resistance factor  $\mu = 5$ . It is therefore no barrier for water vapour and it is diffusion open.

### Thermal insulation

The  $\lambda$  value (thermal conductivity) of the boards when measured to DIN 52612 - 1 and DIN V 4108 - 4 is 0.040 Wm<sup>-1</sup>K<sup>-1</sup> at a density of 160 kgm<sup>-3</sup>.

### Loadings

The compression resistance at 10% compression is 30 kPa. In constructions where loads have to be beard (over beam insulation) the fixing happens with Twice Threaded Screws to lead the load directly into the beam.

### Durability

The boards are not rot-proof. They are dimensionally stable and, when installed properly, will remain effective as insulating material for the life of the building in which they are incorporated.