

# UltraTherm® 045

## High performance sarking boards for walls and roofs

### GENERAL

UltraTherm boards are **tongue and grooved** rigid insulation boards that are ideally suited for the **thermal upgrading** of existing roof constructions. They are also suitable for **externally insulating** timber framed or **green oak framed** buildings.

UltraTherm boards will protect a building envelope from wind and rain whilst still enabling moisture transfer through the construction. A factory applied hydrophobic coating also enables them to be used as a **temporary wall/roof covering** for up to one month.

UltraTherm boards are **fully biodegradable**.

### Applications

- Additional insulation layer for existing buildings
- Insulating sarking board for roof constructions
- Insulating sheathing board for timber-frame



### ADVANTAGES

#### Composition & Manufacture

- Manufactured from renewable resources
- Manufactured from by-products
- Bitumen-free
- CO<sub>2</sub> zero-rated
- Timber fuelled embodied energy
- Actively recycled

#### Installation & Disposal

- No known health risks for installers
- Easily cut to shape with handsaw
- Durable / Low maintenance
- Reusable / Recyclable
- Compostable

#### Performance

- Wind and rainproof from 20 degree pitch upwards
- Acts as temporary roof covering (max. 4 weeks)
- Eliminates thermal cold bridging through timbers
- Vapour permeable
- Enhances thermal performance in Winter
- Enhances thermal performance in Summer
- Good acoustic performance
- Hygroscopic (absorbs & releases moisture)
- Vermin and fungus resistant
- Electrically neutral
- Non-radioactive
- Free from toxins and allergens
- Dimensionally stable (low thermal movement)
- Helps regulate indoor climate
- Low toxic fumes if burn

### PRODUCT DATA

#### Composition

Raw materials	spruce / pine chippings
Hydrating agent	natural tree resin
Fire protecting agent	none
Hydrophobic coating	tree resin / wax emulsion

#### Dimensions

Board thickness	<b>50 / 60 / 80</b> mm
Board size	1780 x 500 mm
Edge type	tongue and groove
Coverage per board	0.84 m <sup>2</sup>
Weight per board	10.3 / 12.3 kg
Boards per pallet	40 / 34 / 26
Coverage per pallet	33.6 / 28.5 / 21.8 m <sup>2</sup>
Weight per pallet	430 kg

#### Technical data

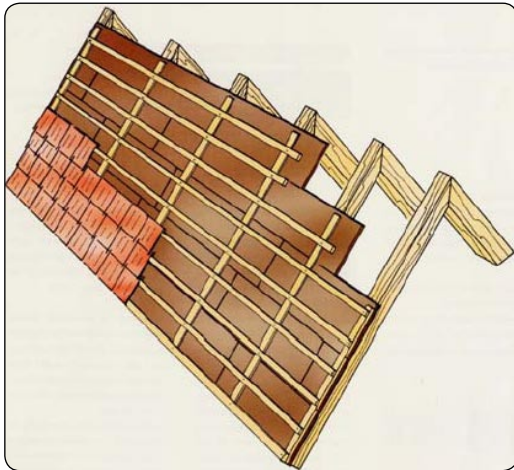
Density, $\rho$	230 kg/m <sup>3</sup>
Thermal conductivity, $\lambda_R$	<b>0.045</b> W/m.K
Thermal resistance, R	1.11 / 1.33 / 1.78 m <sup>2</sup> .K/W
Diffusion resistance, $\mu$	5
Bending strength, $\sigma$	≥ 1.5 N/mm <sup>2</sup>
Water absorption	≥ 1.0 kg/m <sup>2</sup>
Fire rating	Class B2

#### Standards

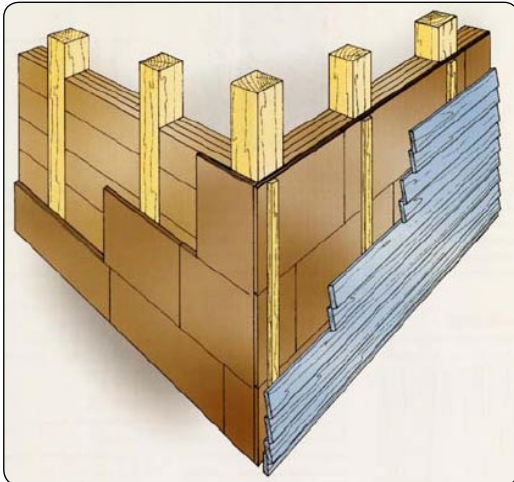
- DIN 68775-1- WF-P-Wh-045-H10-B2
- Certified by Institute of German Master Roofers

## TYPICAL APPLICATIONS

### ... on roofs (no breather membrane required)



### ... on walls (no breather membrane required)



## INSTALLATION NOTES

- Fully engage board joints (tongue and groove)
- Space between rafters can be walked on with caution
- Immediately fix in place with counter battens
- Avoid cross joints
- Lay boards perpendicular to rafters
- Offset vertical joints at least one rafter width
- Butt joints must be primed and taped
- Install Boards with rising tongue
- Use minimum 40 x 80mm Counter battens
- Mechanically fix with 8 x 180mm Screws (see table)
- See also *Installation Guidelines*

## DESIGN CONSIDERATIONS

### Limitations of use

Suitable for 20° roof pitches and above  
Suitable for rafter / support centres up to 1000mm

### Racking strength

UltraTherm 045 boards do not provide racking strength. Racking strength (if required) can be achieved with metal strappings or by using a suitable internal lining board. Please consult your structural engineer.

### Fixing

The screws are installed towards the eaves at an angle of 67° to the roof slope.

Load (kN/m <sup>2</sup> )	Roof pitch [°] / Screw spacing [cm]								
	20°	25°	30°	35°	40°	45°	50°	55°	60°
<b>0.75</b>	175	160	138	130	125	123	127	128	128
<b>1.00</b>	170	140	121	115	113	113	115	117	121

## STORAGE & HANDLING

### Storage

Store and install boards in dry conditions.  
Protect edges of boards from damage.

### Cutting

Cut boards using a fine-toothed hand held circular saw with integral dust extractor.

## SUPPLY

### Availability

UltraTherm wood-fibre insulation boards are available in the UK through Construction Resources.

### Associated products

- UltraTherm Primer & Tape (taping of joints)
- UltraTherm Screws

## SERVICES

### Sales

For cost quotations please contact the Sales Department at the address below.

### Technical

For further technical information on this product please contact a product specialist at the address below.