

# ThermoWall® 040 / 045

## Wood-fibre external wall insulation boards for timber-frame and masonry substrates

### GENERAL

ThermoWall 040 and 045 boards are rigid insulation boards. They are manufactured from the **by-products** of sawmills in southern Germany. The softwood chippings are pulped and soaked in water, then mechanically pressed into boards, dried, and cut to shape. Boards thicker than 20mm are made up of 20mm thick laminations.

Tongue and grooved ThermoWall boards can be applied **directly onto timber frame** without the requirement of a sheathing layer. ThermoWall boards are usually sold together with a mineral-based render system.

### Application

- External walls (masonry & timber-frame)

### ADVANTAGES

#### Composition & Manufacture

- Manufactured entirely from renewable resources
- Manufactured entirely from by-products
- No chemical additives
- No toxins or toxic emissions during manufacture
- CO<sub>2</sub> zero-rated
- Timber fuelled embodied energy
- Actively recycled (i.e. not theoretical)

#### Installation & Disposal

- No known health risks for workforce or installers
- Easily cut to shape and worked
- No VOC emissions
- Durable / Low maintenance product
- Reusable / Recyclable
- Compostable

#### Performance

- Excellent thermal performance in Winter
- Excellent thermal performance in Summer
- High compressive strength
- Vapour permeable
- 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 water
Binder	natural tree resin

#### Dimensions (standard)

Board size	1190 x 590 mm
Board thickness	40 / 60 / 80 / 100 mm
Coverage per pallet	70 / 46 / 35 / 28 m <sup>2</sup>

#### Dimensions (tongue & groove)

Board size	1300 x 500 mm
Board thickness	40 / 60 / 80 mm
Coverage per pallet	63.0 / 41.6 / 31.5 m <sup>2</sup>

#### Dimensions (large format)

Board size	2800 x 1250 mm
Board thickness	40 / 60 / 80 / 100 mm
Coverage per pallet	88 / 58 / 45.5 / 35 m <sup>2</sup>

#### Technical data

Density, $\rho$	170 / 210 kg/m <sup>3</sup>
Thermal conductivity, $\lambda_R$	0.040 / 0.045 W/m.K
Thermal resistance, R	0.5 - 2.5 m <sup>2</sup> .K/W
Diffusion resistance, $\mu$	5
Compressive strength, $\sigma_m$ :	$\geq 40$ / $\geq 110$ kPa
Water absorption	$\geq 1.0$ kg/m <sup>2</sup>
Fire rating	Class B2
Durability	70+ years

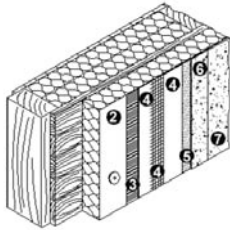
#### Standards

- Certification Z-9.1 - 526 (DIBt)
- DIN 68775-1

## TYPICAL APPLICATIONS

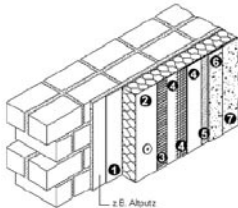
... onto timber-frame or XLSolid®

1. Fixings
2. **ThermoWall®**
3. Undercoat
4. Mesh
5. Primer
6. Finish coat
7. Paint finish



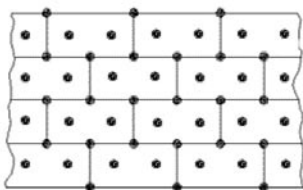
... onto brickwork or ThermoCellit®

1. Fixings
2. **ThermoWall®**
3. Undercoat
4. Mesh
5. Primer
6. Finish coat
7. Paint finish

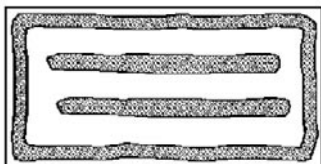


## FIXING

... onto timber substrate (fixing points)



... onto masonry substrate (adhesive)



## DESIGN CONSIDERATIONS

### System components



1. ThermoWall
2. Undercoat
3. Mesh
4. Primer
5. Finish coat
6. Paint finish

Minimum fixings	≥ 8 m	8-20 m
Wood staples (surface / edge)	9 / 20	12 / 30
Wood screws (surface / edge)	6 / 6	6 / 10
Masonry dowels (surface / edge)	6 / 6	6 / 10

## STORAGE & HANDLING

### Storage

Store in dry conditions. Protect from rising damp.

### Cutting

Cut boards using a fine-toothed hand saw, Jig saw, or circular saw with integral dust extractor.

## SUPPLY

### Availability

**ThermoWall®** wood-fibre insulation boards are available direct from Construction Resources or through insulation distributors.

### Packaging

Boards are supplied on pallets (see **Dimensions**).

## 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.