



FERMACELL HD Building Board

# The structural external wall board

## Product information

## One board does it all.

External cladding in timber-framed construction needs many attributes - weatherproofing, structural rigidity, fire protection and sound proofing are specifications that are usually demanded in even the most basic constructions. By combining these benefits in a single board, FERMACELL HD eliminates compromise with a cost effective solution.



With FERMACELL HD Building Board all the essential characteristics required in external cladding are combined in a single component:

### **Weather protection.**

External render is applied directly to the board. No composite thermal insulation substrate is required.

During construction the boards seal the building envelop even without rendering, and can be stored outside.

### **Load Bearing.**

FERMACELL HD Building Board can be used in load-bearing timber frame constructions for racking resistance. They are used as a supporting, structural and stiffening sheathing in external wall cassettes to provide racking against wind loads, buckling and vertical loading.



### Fire protection.

The mineral composition of FERMACELL HD Building Board means it is classified as A1 – Non combustible – in accordance with DIN 4102.

With suitable insulation, wall constructions using FERMACELL HD Building Boards externally and 12.5 mm FERMACELL wallboard internally are fire rated from F 30 to F 90.

### Sound insulation.

FERMACELL HD used in conjunction with FERMACELL wallboard can achieve in excess of  $R_w$  64 dB. More data is available on request.

### Environmental compatibility and health considerations.

Handling and using FERMACELL HD Building Board carries no health risk. As a purely mineral material the panels are completely recyclable. The panels can be reprocessed through a recycling plant and re-used as aggregate material. If such an option is unavailable, then disposal as construction waste is also permissible.

### Handling.

FERMACELL HD Building Boards are easy to handle and are equally well suited to modular and industrial prefabrication as well as on-site use.

Cutting panels to size is simply carried out using conventional wood-working machinery. In general, carbide-tipped saw blades should be used. Tool life can be prolonged if diamond-tipped saw blades are used. Cutouts can be created using a pad saw.

A single layer external sheathing with FERMACELL HD Building Boards gives not only weather protection and stable base for rendering but also provides excellent acoustic and fire protection.

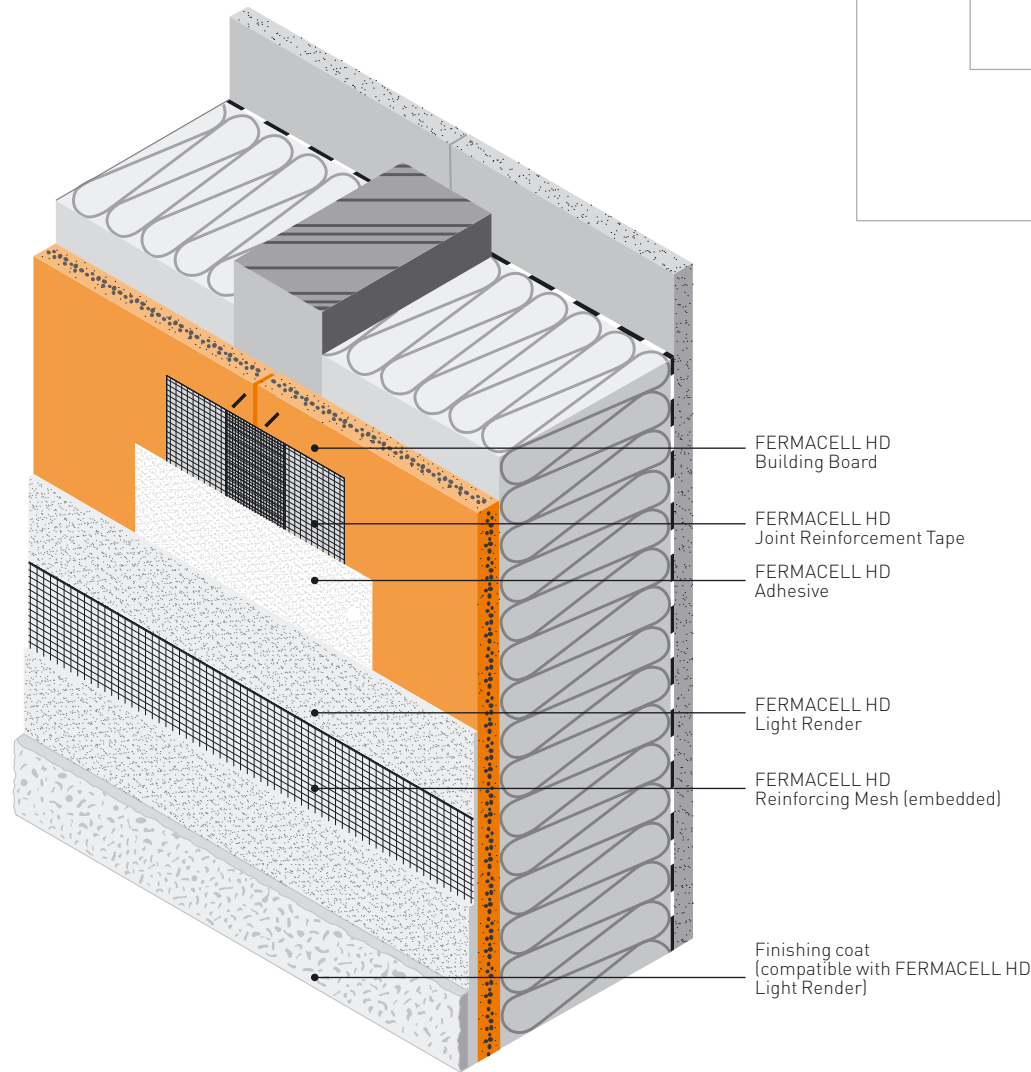
For loaded timber frame applications, FERMACELL HD Building Boards are fixed using staples. For non-loaded applications, the board may be nailed.



Once jointing and rendering of FERMACELL HD is complete, the construction is weather-proofed.

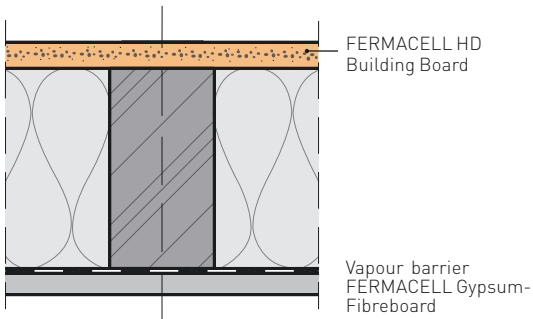


External wall with rendered finish.

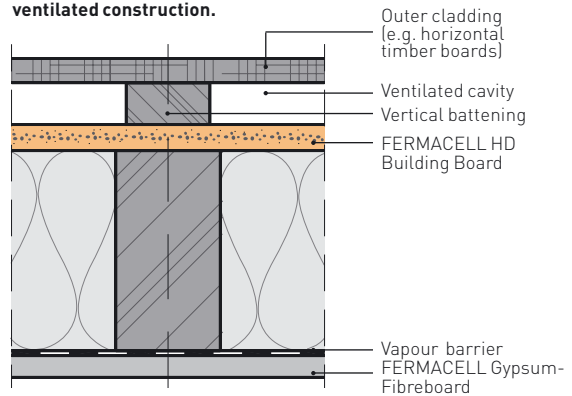


# Strong and durable weather protection for all construction types.

**External wall with directly boarded, non-ventilated construction.**



**External wall with cladding, ventilated construction.**



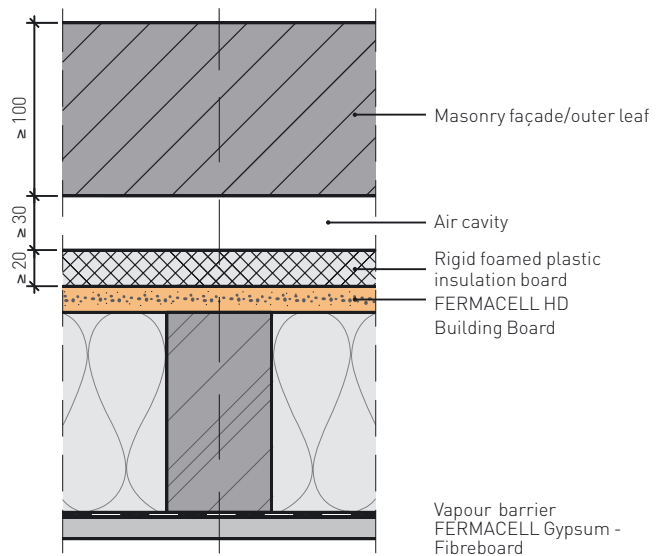
## Jointing technique.

- FERMACELL HD Joint Reinforcement Tape for reinforcing board joints.
- FERMACELL HD Adhesive for covering the joint reinforcement tape and the fixings.

## Render system.

- FERMACELL HD Light Render for applying a full surface covering to the boards (5–6 mm thick layer)
- FERMACELL HD Reinforcing Mesh for full surface embedding in the FERMACELL HD Light Render (Mesh size: 4 mm x 4 mm; alkali-resistant)

**External Wall with outer leaf of masonry construction.**

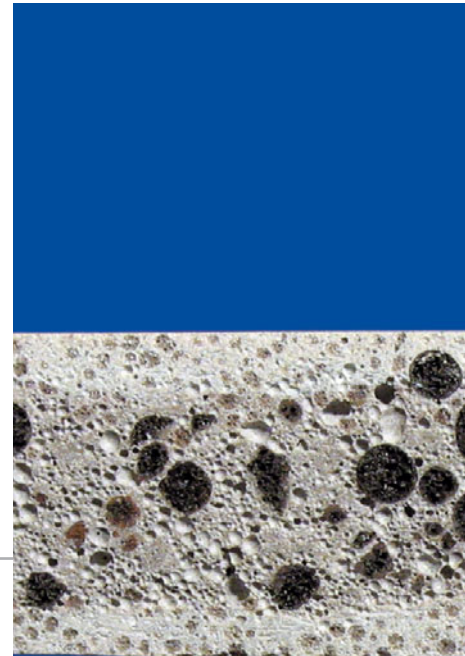


# Characteristics and Technical data.

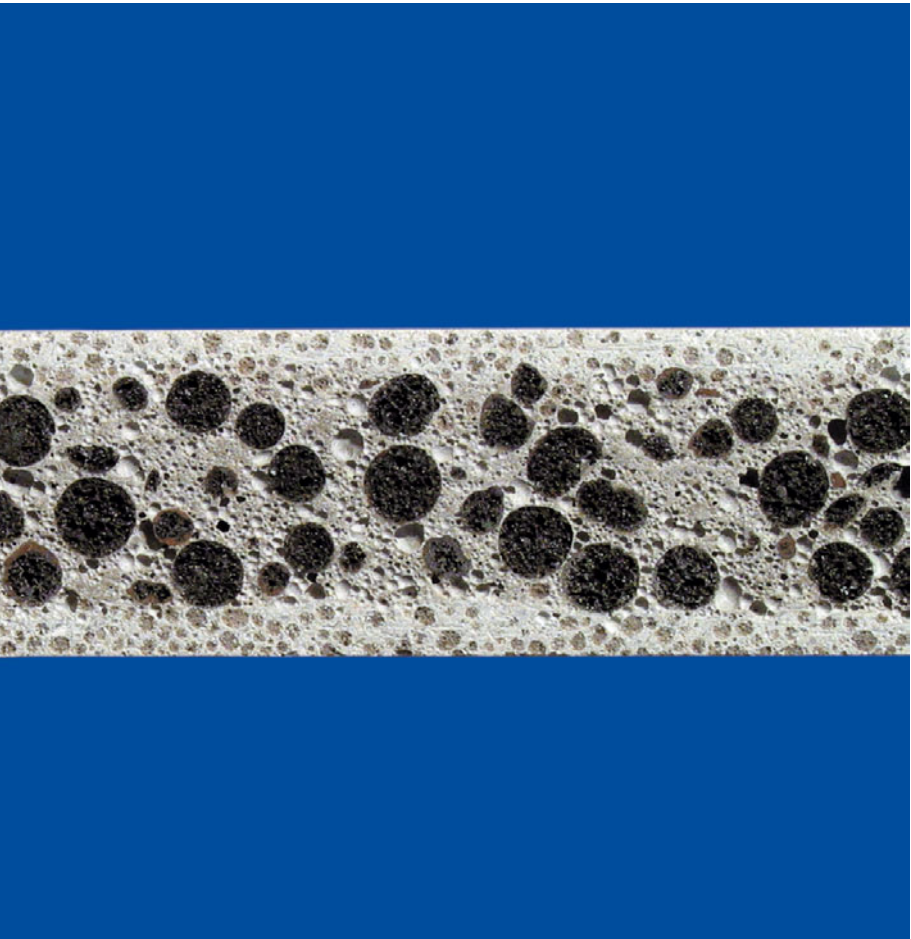
**FERMACELL HD Building Boards are cement-bonded, glass fibre-reinforced sandwich boards with an aggregate of aerated clay and recycled foamed glass granules.**

FERMACELL HD boards are especially practical because of their light weight and ease of use combined with high strength. The water repellent outer layer of FERMACELL HB board prevents moisture ingress whilst allowing vapour to be retained.

The boards are cement grey in colour and the surface is flat on one side and lightly corrugated on the other.



Virtually all building designs can be created using FERMACELL HD Boards. The character of a house can be shaped by the choice façade, style of rendering and careful selection of other building elements. FERMACELL HD Boards remove limitations in design.



Standard Sizes FERMACELL HD Building Board.

Length	2400 mm
Width	1200 mm
Thickness	15 mm

Special sizes (cuts) can be supplied on request

Product technical data – FERMACELL HD Building Board.

Density	1000 kg/m <sup>3</sup>
Bending strength	> 3.5 N/mm <sup>2</sup>
Compressive strength (Compressive load perpendicular to board surface)	> 6 N/mm <sup>2</sup>
Modulus of elasticity at room temperature (20 °C)	4500 ± 500 N/mm <sup>2</sup>
Building material classification to DIN 4102	A1
Water vapour diffusion resistance coefficient $\mu$	40
Thermal conductivity $\lambda_R$	0.4 W/(m K)
Moisture content at room temperature	approx. 7 %

Xella  
Trockenbau-Systeme GmbH  
Postfach 1460  
D-38604 Goslar

We reserve the right to make technical changes at any time.  
For further information or advice not covered by this booklet,  
please call our technical hotline.

Xella Dry Lining Systems  
P.O. Box 10028  
Sutton Coldfield B72 1WG

Telephone: 0870 – 6090306  
Telefax: 0870 – 2402948  
[www.fermacell.co.uk](http://www.fermacell.co.uk)