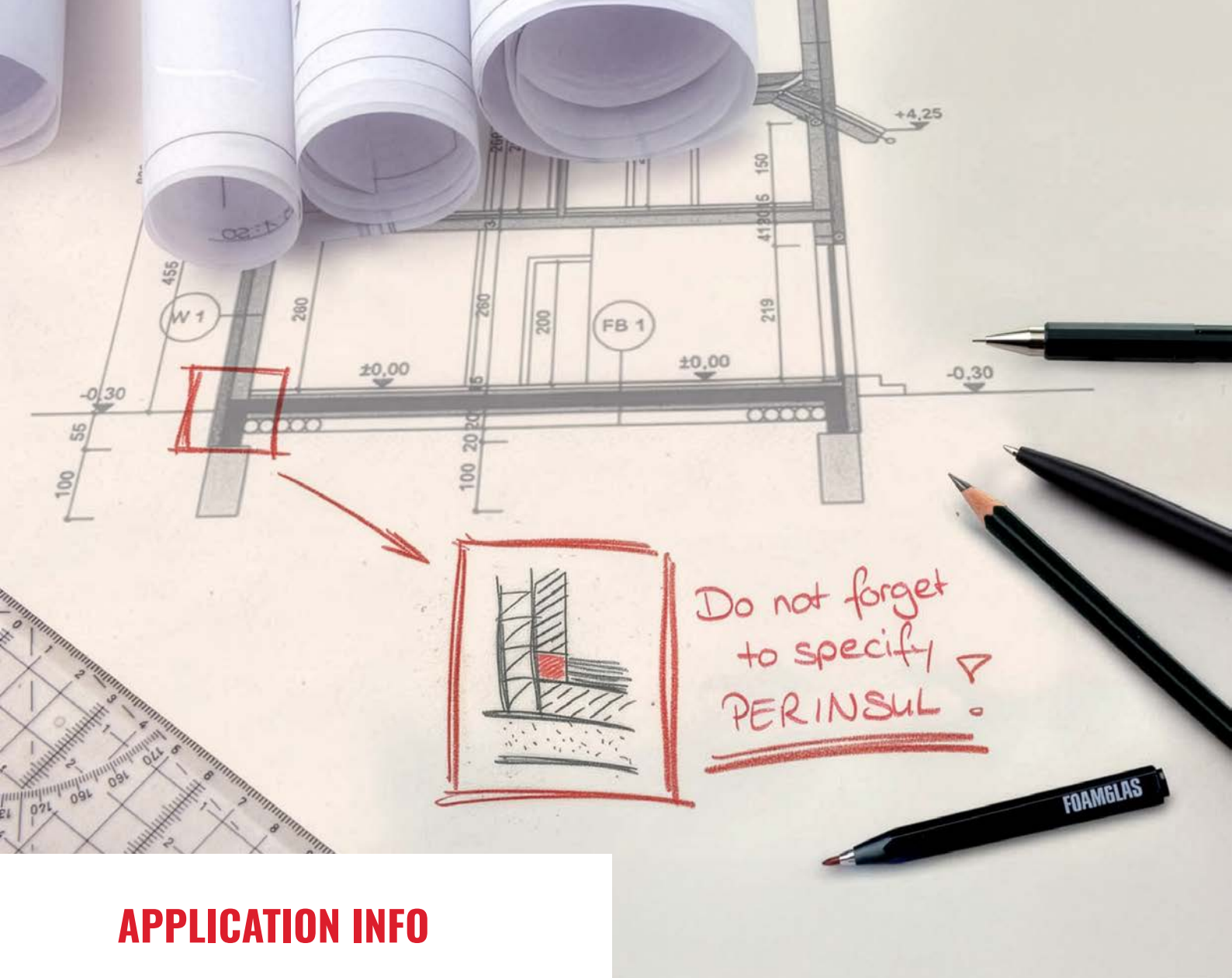




APPLICATION INFO

FOAMGLAS® PERINSUL HL

THE EFFICIENT SOLUTION FOR THERMAL BREAKS

Universal thermal break element

www.foamglas.com



FOAMGLAS®

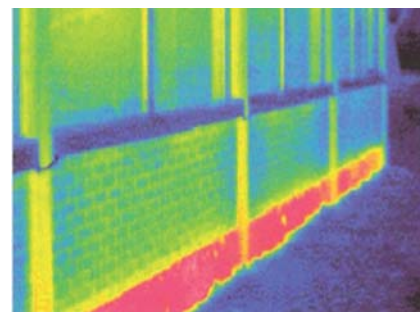
THE NEGATIVE EFFECTS OF THERMAL BRIDGES

The reduction and elimination of thermal bridges within the thermal envelope plays a significant part in a buildings thermal efficiency. This is particularly critical as insulation levels increase and is a key driver in the design of low energy and passive house building. With the ever increasing regulations on thermal performance - just increasing the amount of insulation is no longer the only option as this can lead to the following issues.

- Moisture within the wall construction
- Risk of corrosion to metal substructures and construction components
- Cold sensation from wall surfaces (lack of thermal comfort)
- Mildew and mould spores
- Increased heat flux (up 15%)



Example of degradation on a wall.



Example of thermal bridge at the foot of a wall.

FOAMGLAS® PERINSUL HL

FOAMGLAS® PERINSUL is a thermal break element made of cellular glass which supports uniform compressive loads and is impermeable and vapour-tight. It is used to provides a structural insulated connection at the junctions between floors, walls, roofs and openings.

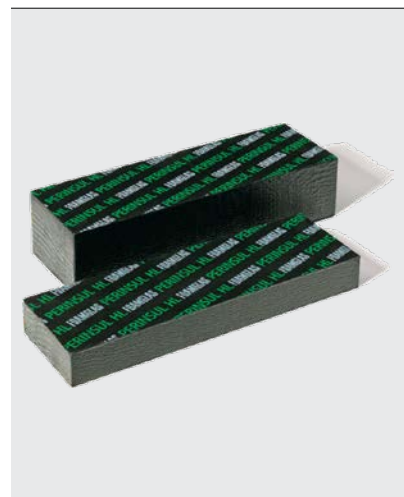
FOAMGLAS® PERINSUL is a proven and tested concept for providing continuous insulation at the vertical and horizontal connections and reducing heat loss.

Due to its technical features, FOAMGLAS® PERINSUL is the only component that has insulating, loadbearing and moisture barrier capabilities. It is an ideal solution to be used in a variety of designs to eliminate cold bridges.

Dimensions*	Length 45 cm x thickness 5 cm						
Width [cm]	10	14	15	19	20	24	30
	Length 45 cm x thickness 10 cm						
Width [cm]	10	14	15	19	20		

* For other dimensions contact the manufacturer.

Product data according to EN 13167 ¹⁾ and ETA ²⁾	PERINSUL HL (High load)
Density ($\pm 15\%$) (EN 1602)	200 kg/m ³
Thickness (EN 823) ± 2 mm	50 and 100 mm
Length (EN 822) ± 2 mm	450 mm
Width (EN 822) ± 2 mm	from 90 to 365 mm
Thermal conductivity (EN ISO 10456)	$\lambda_D \leq 0,068$ W/(m·K)
Fire behaviour (EN 13501-1)	Euroclass E (core material Euroclass A1)
Point load (EN 12430)	PL $\leq 1,0$ mm
Compressive strength (EN 826-A)	CS $\geq 2,75$ MPa
Flexural modulus of elasticity	E = 1500 MN/m ²
Compressive strength CS-mean per unit capped with mortar (EN 772-1) ³⁾	F _b = 2,9 MPa
Compressive strength of masonry f _k ³⁾	KZ: limestone: 1.90 MPa P: full ceramic stone: 1.60 MPa SB: ceramic fast block: 1.60 MPa



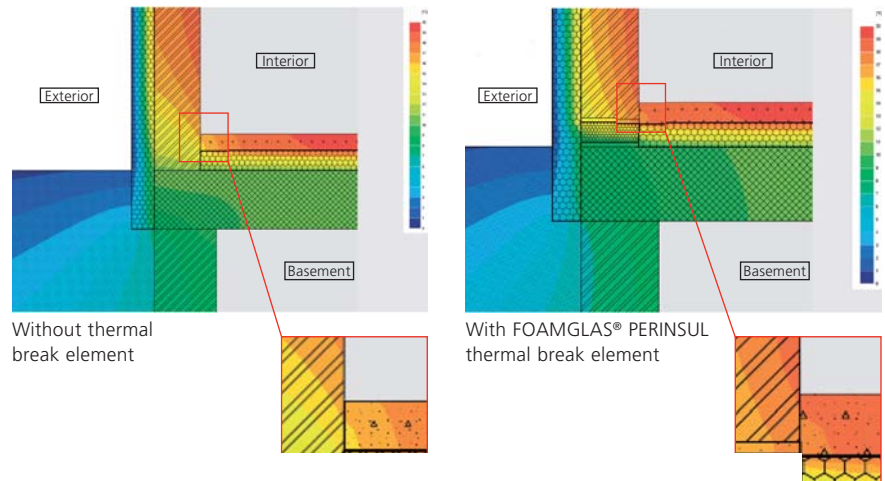
INSTALLATION

The FOAMGLAS® PERINSUL product is bedded into mortar beneath the structural load, laid end to end without mortar in the butt joints; mortar is applied as bedding below and above the thermal break element.



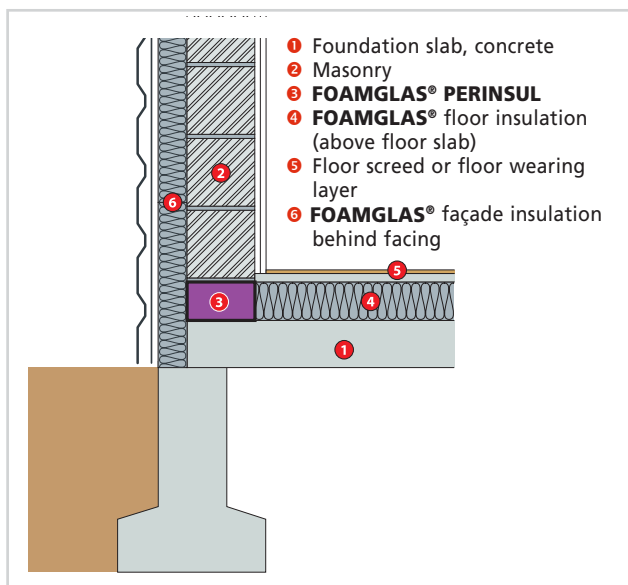
WHY CHOOSE FOAMGLAS® PERINSUL HL ?

- Efficient moisture barrier
- Loadbearing capabilities (supports high uniform compressive loads)
- No condensation
- Cellular glass is non-combustible
- Resistant to vermin and rodents
- Cannot rot, no mildew and mold growth
- Designed to deliver stable insulating performance over time

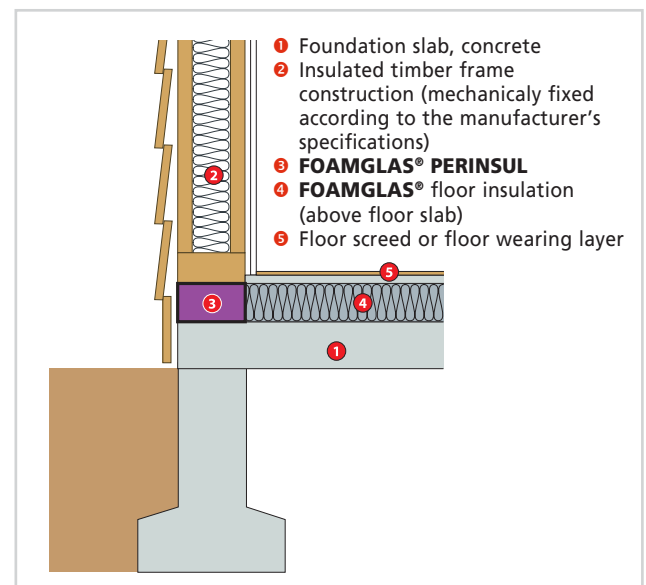


APPLICATIONS

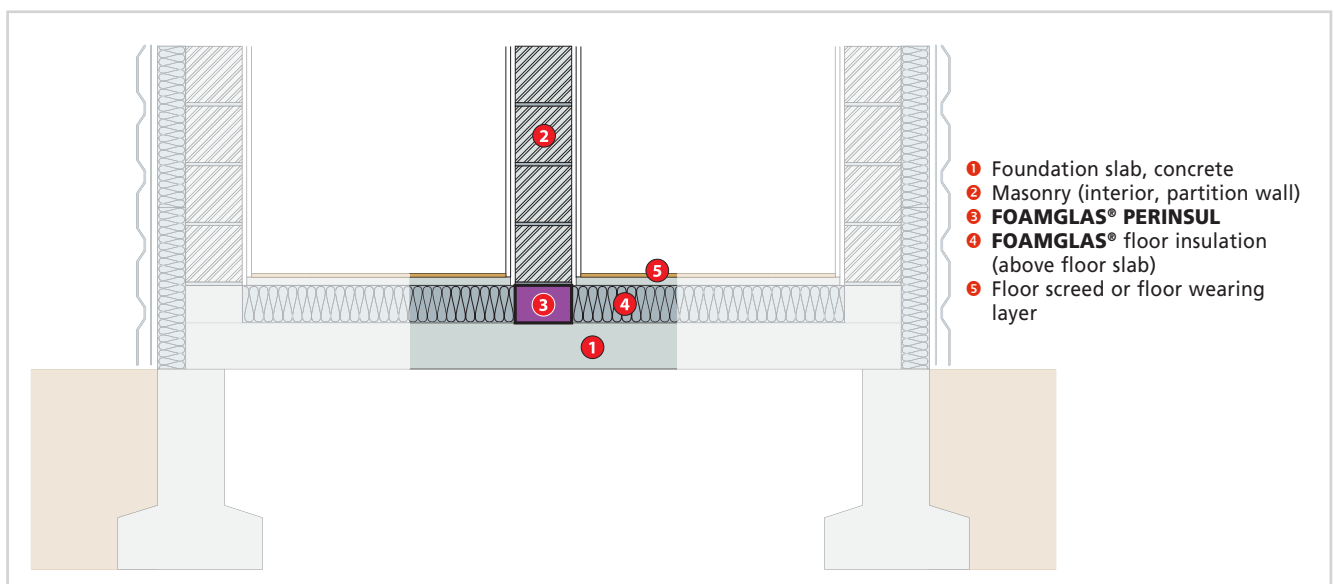
Beneath structural wall

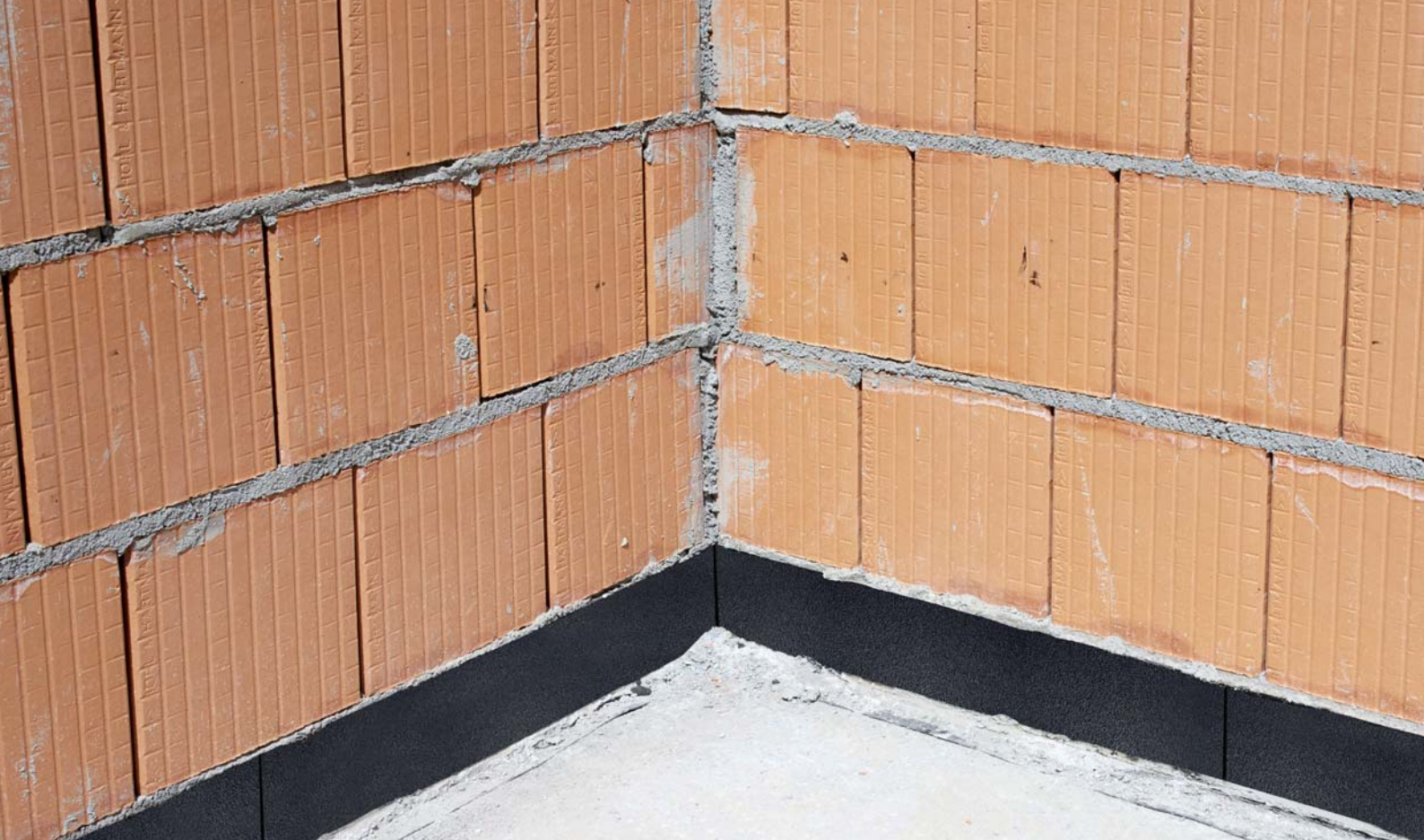


Beneath timber frame construction



Beneath partition wall





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