

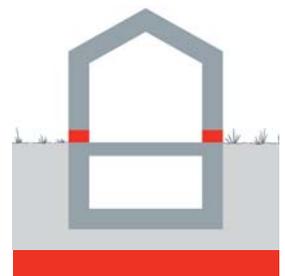
Application Info

# FOAMGLAS® PERINSUL The Efficient Solution for Thermal Breaks

Universal thermal break element



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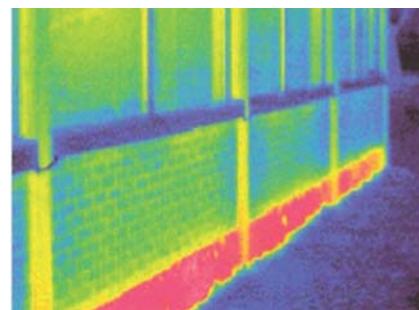
## The negative effects of thermal bridges

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

FOAMGLAS® PERINSUL is a thermal break element made of cellular glass which supports uniform compressive loads and is fully water and vapour proof. It is used to provide 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 the ultimate 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 <sup>1)</sup> and ETA <sup>2)</sup>	PERINSUL S (Standard)	PERINSUL HL (High load)
Density ( $\pm 15\%$ ) (EN 1602)	165 kg/m <sup>3</sup>	200 kg/m <sup>3</sup>
Thickness (EN 823) $\pm 2$ mm	50 and 100 mm	50 and 100 mm
Length (EN 822) $\pm 2$ mm	450 mm	450 mm
Width (EN 822) $\pm 2$ mm	from 90 to 365 mm	from 90 to 365 mm
Thermal conductivity (EN ISO 10456)	$\lambda_D \leq 0.050$ W/(m·K)	$\lambda_D \leq 0.058$ W/(m·K)
Fire behaviour (EN 13501-1)	Euroclass E (core material Euroclass A1)	Euroclass E (core material Euroclass A1)
Point load (EN 12430)	PL $\leq 1.0$ mm	PL $\leq 1.0$ mm
Compressive strength (EN 826-A)	CS $\geq 1.6$ MPa	CS $\geq 2.75$ MPa
Flexural modulus of elasticity	E = 1500 MN/m <sup>2</sup>	E = 1500 MN/m <sup>2</sup>
Compressive strength CS-mean per unit capped with mortar (EN 772-1) <sup>3)</sup>	F <sub>b</sub> = 1,8 MPa	F <sub>b</sub> = 2,9 MPa
Compressive strength of masonry f <sub>k</sub> <sup>3)</sup>	KZ: limestone: 1.20 MPa P: full ceramic stone: 0.90 MPa SB: ceramic fast block: 0.90 MPa	KZ: limestone: 1.90 MPa P: full ceramic stone: 1.60 MPa SB: ceramic fast block: 1.60 MPa

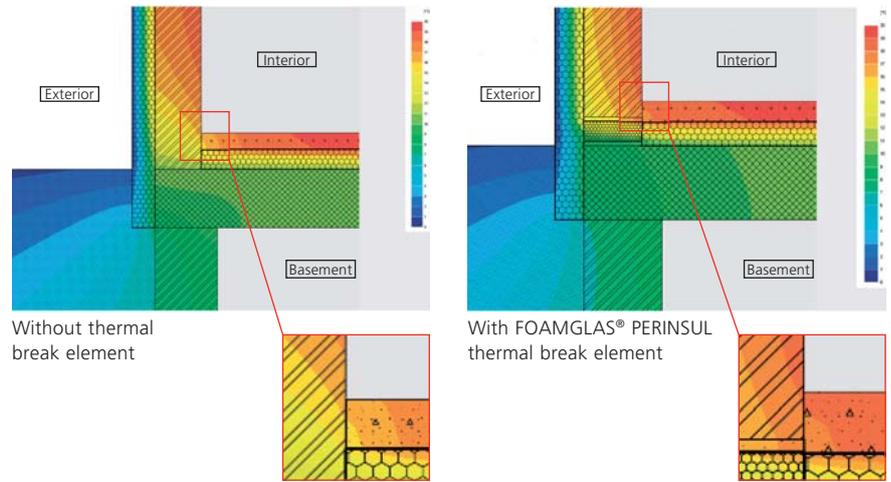
## Installation

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.



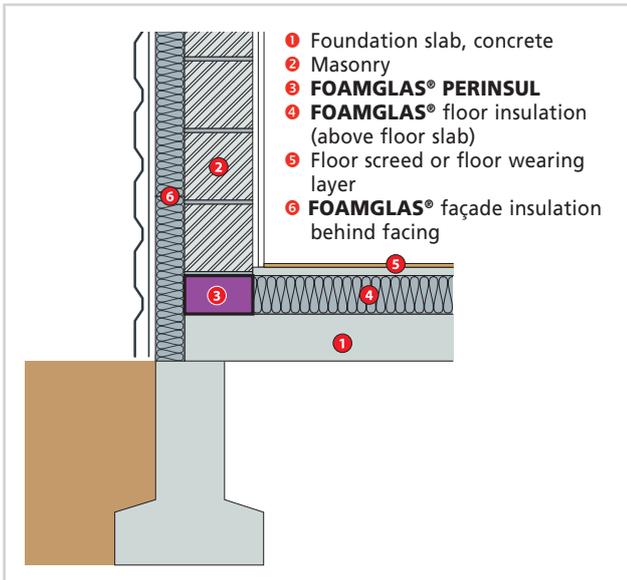
## Why choose FOAMGLAS® PERINSUL ?

- Efficient moisture barrier
- Loadbearing capabilities (supports high uniform compressive loads)
- No condensation
- Cellular glass is non-combustible
- Vermin-proof, resists to rodents
- Cannot rot, no mildew and mold growth
- Insulating capabilities remain permanent for the lifetime of the building

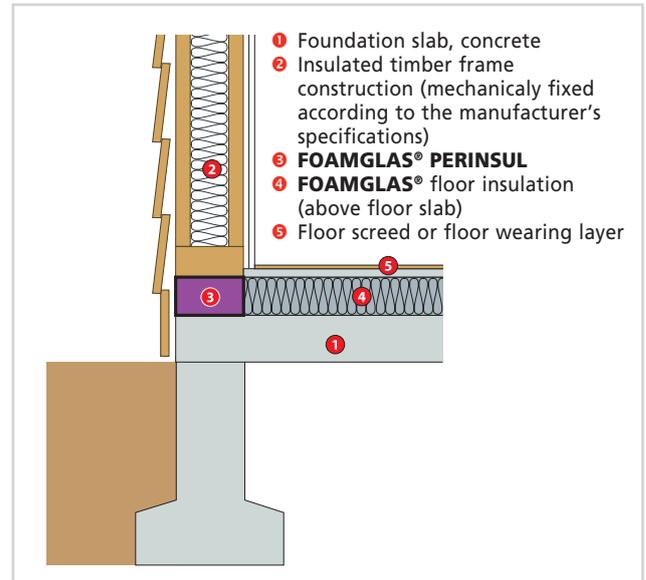


## Applications

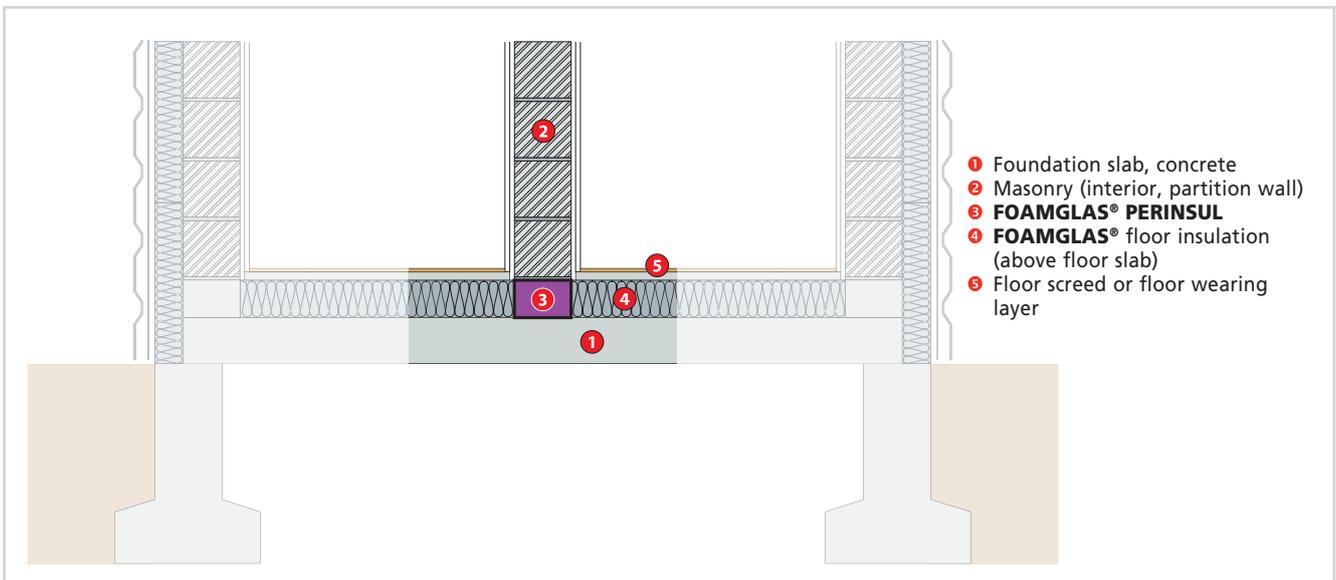
Beneath structural wall

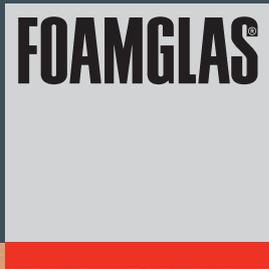


Beneath timber frame construction

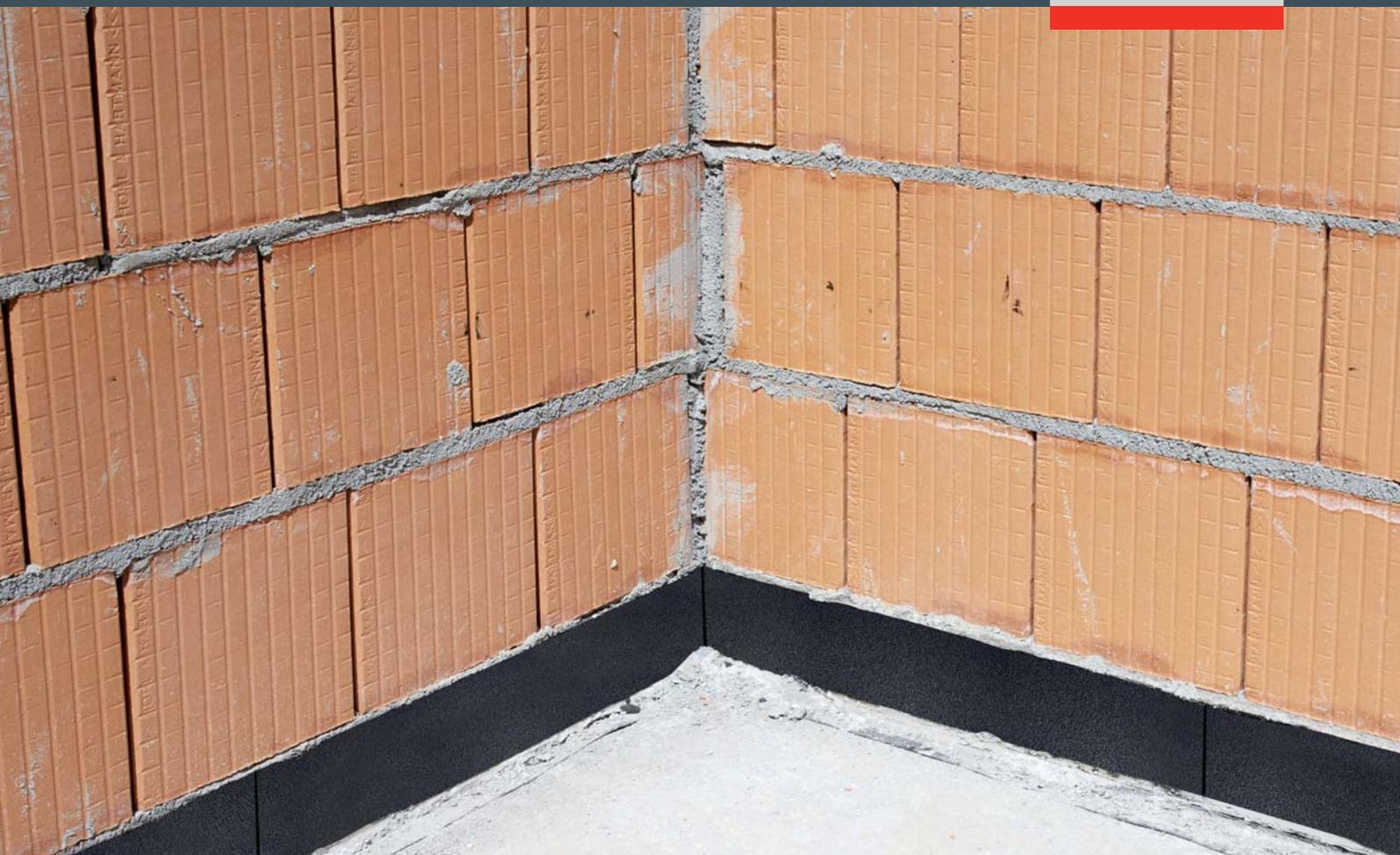


Beneath partition wall





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