



## 1.1.2 Floor Insulation (load bearing) with Waterproofing Membrane beneath Structural Slab

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### Detailed description

#### Properties:

- Waterproof.
- High compressive strength without deflection or movement.
- Non-combustible.
- Impervious to water and water vapour.
- Sealed cellular structure.
- Dimensionally stable.
- Acid resistant.
- Easily cut to shape.
- Resistant to vermin.
- Recycled content scrap glass: Minimum 60%.
- Ozone Depletion Potential (ODP): <1%.
- Global Warming Potential (GWP): Zero.
- GreenSpec rating, see 'Cellular Glass' or 'Foamed Glass'.
- Green Guide rating, see 'Cellular Glass'.

#### Advantages:

- Quality: Systems with high quality materials; management by systematic site inspections and professional consulting.
- Cost efficiency: The high durability preserves maximum value and ensures minimal maintenance costs.
- Sustainability: Optimum insulation performance and protection against moisture for future generations. Scrap can be reclaimed and re-cycled to make new Foamglas.
- Insulation performance: Insulation performance is permanent; ageing does not take place. Use above and below ground, unaffected by moisture, humidity and compressive loads. Proven to retain its thermal and vapour control characteristics for > 50 years.
- No thermal bridging: Fully bonded insulation system, zero fixings prevent thermal bridging, and exposed fixings.
- Non-toxic: Foamglas cellular glass contains no toxic substance, does not contaminate water or the ground, in cases of fire, does not develop fumes or toxic gases.
- Sealed structure and non-hydroscopic: Each cell has a glass wall, giving the unique structural strength, vapour tight and non-hydroscopic properties.
- A separate vapour barrier is not required: With its purpose manufactured adhesives, Foamglas is suitable for extreme humidity



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environments and gives control of the vapour drive in any direction. Foamglas is an insulation and vapour barrier in one single material.

- High compressive strength: Capability to withstand high compressive loads without deflection or movement.
- Dimensional stability: Very low rates of thermal movement, mechanical fixings are not required to prevent delamination from the parent structure.

## Product guidance - As Standard

### Characteristics:

- Thermal performance is permanent and never changes.
- Manufactured from recycled glass (minimum 60%) and natural raw materials which are available in abundant supply - sand.
- The insulation is totally inorganic, contains no ozone depleting propellants (CFCs, HCFCs etc), flame resistant additives or binders; VOC or other volatile substances.
- For substrate quality and suitability, see Technical Guide TG1.

### Foamglas® Ready Board (T4+):

- Density (EN 1602,  $\pm 10\%$ ): 115 kg/m<sup>3</sup>.
- Length (EN 822,  $\pm 5$  mm): 1200 mm
- Width (EN 822,  $\pm 2$  mm): 600 mm.
- Thermal conductivity (EN ISO 10456):  $\leq 0.041$  W/m·K.
- Reaction to fire (EN 13501-1): Core material Euroclass A1.
- Compressive strength (EN 826 annexe A):  $\geq 600$  kPa.
- Flexural modulus of elasticity (EN12089): 700 MN/m<sup>2</sup>.
- Bending strength (EN 12089):  $\geq 450$  kPa.
- Tensile strength (EN 1607):  $\geq 100$  kPa.
- Thermal expansion coefficient (EN13471):  $9 \times 10^{-6}$  K.
- Impervious to water vapour (EN ISO 10456):  $\mu = \infty$  infinity.
- Ozone Depletion Potential (ODP):  $< 1\%$ .
- Global Warming Potential (GWP): Zero.
- Green Guide Rating A.
- GreenSpec listing see 'Cellular Glass' or 'Foamed Glass'.
- Manuf to Environmental Management System ISO14001.
- CEN Keymark: 001-BK-516-001-0029-T00A.
- CPR DOP: 120200015.

## Product specification

### Manufacturer

- Name: FOAMGLAS®

- Web: [www.foamglas.co.uk](http://www.foamglas.co.uk)



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**Product reference** 1.1.2 Floor Insulation (load bearing) with Waterproofing Membrane beneath Structural Slab

**Primary layer** Compacted hardcore, as section Q20  
Subsoil

**Lean concrete mix** As section E10

**Levelling material** Chippings, stabilized sand or liquid mortar

**Insulation**

- Type Foamglas® Ready Board (T4+)

- Thickness 40 mm  
50 mm  
60 mm  
70 mm  
80 mm  
90 mm  
100 mm  
110 mm  
120 mm  
130 mm  
140 mm  
150 mm  
160 mm  
170 mm  
180 mm

**Bituminous waterproofing membrane** As section J40

**Separating layer** As section J40

**Concrete slab** As sections E10–42