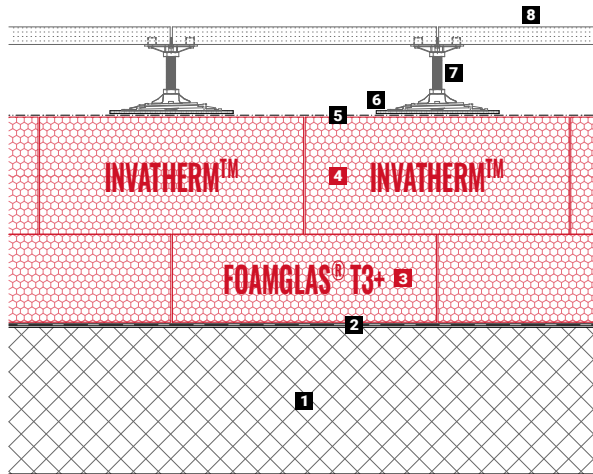


Inverted roof with non-combustible insulation on a continuous support

FOAMGLAS® INVATHERM™ loose laid (double layer system)

Schematic drawing

System 4.8.4



1. Concrete roof deck in compliance with BS 6229
2. Waterproofing membrane
3. FOAMGLAS® T3+ slab
4. FOAMGLAS® INVATHERM™
5. Water flow reducing layer (WFRL)
6. Load spreading plates or protective pads
7. Support system
8. Paving

Features and advantages of the FOAMGLAS® solutions

- **Combustibility:** Euroclass A1 FOAMGLAS® insulation products for inverted roof systems.
- **High Compressive Strength:** Tested to Annex A of EN826 with a compressive strength of 400* kPa without deformation – please see specific Product Data Sheets for further guidance.
- **Long Term Performance:** The durability of FOAMGLAS® insulation results in long-term dimensional stability and time-tested performance.
- **Quality:** The system is made of high-quality materials.
- **Safety:** FOAMGLAS® insulation contains no toxic substances and in the event of a fire, does not develop fumes or toxic gases, nor does it contribute to spread of fire.

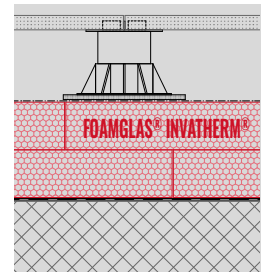
*The application of a suitable factor of safety is recommended when undertaking structural assessment of product performance.

Recommendations for architect

Base layer: FOAMGLAS® T3+ slabs
(600 x 450 mm)

Top layer: FOAMGLAS® INVATHERM™
(600 x 450 mm)

- FOAMGLAS® T3+ slab and FOAMGLAS® INVATHERM™ are non-combustible, non-toxic, Euroclass A1 insulation materials.
- This inverted roof system can only be used on buildings where the internal temperature is always 8°C or more.
- This inverted roof system can also be used for zero fall roofs in compliance with BS 6229 with limited access, balconies and terraced roofs subject to pedestrian access only.
- All layers of the build-up have to be in accordance with the local regulations.
- Insulation thickness is to meet building regulations or the project specific U-value requirements.
- For further information regarding FOAMGLAS® products or any specific properties, please consult our PDS.
- FOAMGLAS® INVATHERM™ slabs should not be trimmed down on site to less than 150 x 150 mm.
- The tolerance and general conditions of the substrate are important criteria when using FOAMGLAS® INVATHERM™ (refer to document TG05 for further information). FOAMGLAS® Technical Department can be consulted for further guidance.
- For technically correct installation, relevant standards and guidelines must be observed.
- Negative back falls, which can lead to ponding, are not acceptable and should be corrected in compliance with BS 6229.



Inverted roof with non-combustible insulation on a continuous support

FOAMGLAS® INVATHERM™ loose laid (double layer system)

System 4.8.4

Installation instructions

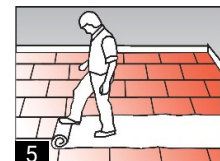
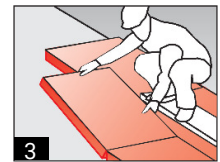
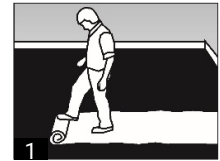
- The waterproofing membrane has to be installed on the substrate in accordance with the manufacturer's recommendations. [1]
- 1. Installation instructions for FOAMGLAS® T3+ slabs - Base Layer:
 - FOAMGLAS® T3+ slabs must be entirely supported on the substrate. If this is not the case, the bottom side of the slab has to be trimmed and shaped, such that the FOAMGLAS® T3+ slabs rest flat on the substrate. This must always be done when the membrane is installed with overlaps. [2]
 - When laying the insulation any gaps between FOAMGLAS® T3+ slabs must be avoided. Apply FOAMGLAS® T3+ slabs with staggered and tight-butted joints as shown in the TG05 Technical Guidelines. [3]
- 2. Installation instructions for FOAMGLAS® INVATHERM™ - Top Layer:
 - Inspect the Base Layer to ensure the top surface of the FOAMGLAS® T3+ Slabs is level and true. The FOAMGLAS® INVATHERM™ must be continuously supported by the base layer of FOAMGLAS® T3+ slabs. If necessary, the slab top surface must be smoothed off, prior to the installation of the FOAMGLAS® INVATHERM™. [4] For further information consult the TG05 Technical Guidelines.
 - All joints between the FOAMGLAS® INVATHERM™ slabs must be tight and avoid gaps.
 - Install FOAMGLAS® INVATHERM™ with staggered and tight-butted joints, following the TG05 Technical Guidelines.
 - Lay the Water Flow Reducing Layer over the FOAMGLAS® INVATHERM™, in accordance with the manufacturer's instructions (loosely laid). [5]
 - Apply load support bases, in accordance with the manufacturer's instructions.
 - Apply the support system, in accordance with the manufacturer's instructions.
 - Apply the walking surface layer of paving or tiles.
 - To achieve the U-value performance, the Water Flow Reducing Layer must be specified and installed following the manufacturer's instructions and any relevant local regulation.

Recommendations for the contractor

- The build up and tolerances of the substrate have to be in accordance with relevant standards and guidelines.
- Safety Data Sheets (SDS) and labels must be read before starting the works on site. The Contractor shall be responsible for all necessary health and safety precautions.
- The system build-up and tolerances of the substrate have to be in accordance with relevant standards and guidelines for the FOAMGLAS® INVATHERM™.
- The flatness and the general conditions of the substrate are important criteria when using FOAMGLAS® INVATHERM™ (refer to document TG05 document for further information).
- Site conditions shall be considered, including suitability of ambient and surface temperatures, as per manufacturer's instructions.
- FOAMGLAS® T3+ and FOAMGLAS® INVATHERM™ should not be trimmed to less than 150 mm width to ensure a robust installation.
- Staggered joints need to be placed with a minimum of 150 mm from each other to ensure a good performance. The protection layer and ballast should be installed immediately, upon installation of FOAMGLAS® INVATHERM™, to prevent accidental damage to the material.
- Adequate measures shall be taken in order to avoid any risks of damage to the materials during construction. Point loads need to be avoided on the top surface of the FOAMGLAS® INVATHERM™, make sure to take adequate measures when walking and working on the surface.
- Minor damages on the FOAMGLAS® INVATHERM™ can be repaired with our PC® SKYFIX A2.
- Major damages to the FOAMGLAS® INVATHERM™ must be replaced. Technical Support and on-site assistance can be provided upon request.

Building internal temperature

- The FOAMGLAS® INVATHERM™ inverted roof insulation system is designed for use upon buildings with an internal temperature of minimum 8°C.



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Owens Corning Insulation (UK) Ltd.
31-35 Kirby Street
London, EC1N 8TE
technical@foamglas.co.uk