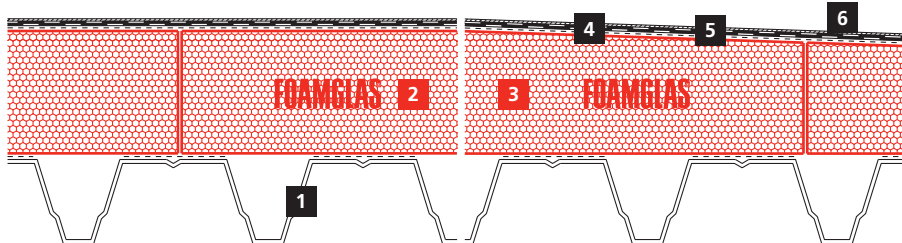


## Compact Solar Roof with integrated photovoltaic system on trapezoidal metal deck

FOAMGLAS® slabs with hot bitumen

### Schematic drawing



### System 4.7.2

- 1 Trapezoidal metal deck
- 2 FOAMGLAS® slabs or
- 3 FOAMGLAS® TAPERED slabs, laid in hot bitumen
- 4 Two layers of bituminous waterproofing membranes
- 5 Photovoltaic laminate

### FOAMGLAS® product properties

Waterproof – Resistant to vermin – High compressive strength –  
Non-combustible – Impervious to water vapour – Dimensionally stable –  
Acid resistant – Easily cut to shape – Ecological

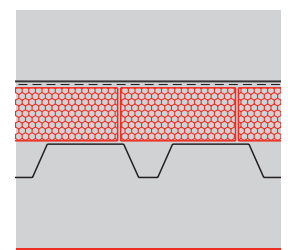
### Advantages of the FOAMGLAS® system

- **Quality:** Systems with high quality materials. Quality management by systematic site inspections and professional consulting.
- **Cost efficiency:** The high durability preserves maximum value and guarantees minimal maintenance costs.
- **Sustainability:** Optimum insulation and protection against moisture for generations. Gain of renewable solar energy with pioneering solar compact roof system.
- **Safety:** Compact, fully bonded insulation system preventing large-scale damages and renovations in the event of a leak caused by a puncture of the roofing membrane. No penetrations by mechanical fastening. No risk of condensate due to air leakage.
- **Functionality:** Insulation and vapour barrier in one single functional layer. Flexible and easy installation of a gradient through prefabricated tapered slabs.

### Recommendations for architects

- Normally used: FOAMGLAS® slabs T4+ or FOAMGLAS® TAPERED T4+, size 450/600 mm.
- Insulation thickness to meet building regulations or project-specific U-value requirements. Please also consult our product overview. It contains information on all our products, their field of application and their specific properties.
- **The characteristics of the steeldeck such as thickness, deflection, trough opening etc. are very important to choose the right type, thickness and / or application method of FOAMGLAS® (see TG1). Please contact our Technical Department to verify the criteria of the chosen steeldeck.**
- **For technically correct implementation, relevant standards and guidelines must be observed.**

**Solutions for technical details and specification clauses on request.** Further proposals and solutions are available any time from our technical consultants. **Updated: November 2010.** We explicitly reserve the right to change the technical specifications. The current values can be found on our website under: [www.foamglas.co.uk/building/applications](http://www.foamglas.co.uk/building/applications)



## Compact Solar Roof with integrated photovoltaic system on trapezoidal metal deck

FOAMGLAS® slabs with hot bitumen

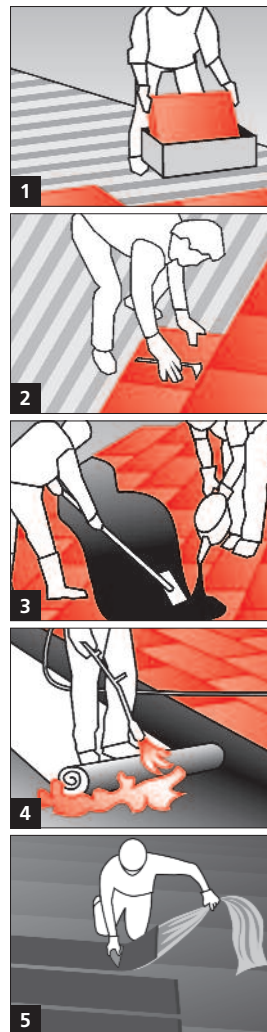
### System 4.7.2

#### Installation instructions

- Clean and degrease the crowns of the profiled metal deck.
- Apply bituminous primer with roller (or spraying equipment) on the clean crowns of the metal deck in case of galvanised steel deck, coverage  $\sim 0.2 \text{ l/m}^2$ .
- Apply FOAMGLAS® slabs fully bonded to the substrate, with staggered and bitumen-filled butted joints, using the dipping method. Coverage  $\sim 2.0\text{--}4.0 \text{ kg/m}^2$ , dependent on the thickness of the insulation:  
Dip one short and one long side as well as the bottom side of the FOAMGLAS® slabs in the bitumen dipping tray. Preferentially the FOAMGLAS® slabs should be laid with the long side parallel to the profile ridges on the crowns of the profiled metal sheets. (1/2)
- Top coat of hot bitumen, coverage  $\sim 2.0 \text{ kg/m}^2$ . Pour the hot bitumen and spread with the rubber spreader on the FOAMGLAS® surface. (3)
- Possible waterproofing variation: Apply two layers of bituminous waterproofing membranes covering the entire surface. First and second layer are torched on. Joints overlapping at least 100 mm, with staggered courses. (Further installation and waterproofing proposals with bituminous membranes or, for example, also with a combination of bituminous and synthetic membranes are available on request). (4)
- Bond the photovoltaic laminates. (5)

#### Recommendations for the contractor

- The build up and tolerances of the substrate have to be in accordance with relevant standards and guidelines.
- Substrate and ambient temperature should not be below  $+5^\circ \text{C}$ .
- A layer of waterproofing membrane must be applied immediately after the insulation has been installed. At the end of each day or every work interruption, all remaining naked surfaces as well as the front sides must be covered with a top coat.
- Adequate measures should be taken in order to avoid any risks of damage by other contractors during construction.
- Protect sensitive components provided by other suppliers against blobs of hot bitumen and the effect of heat
- The tray for the dipping method can be obtained from our company.
- **Please contact our technical consultants; they can help you by providing support or on-site assistance free of charge.**



The technical guidelines for the application and the installation of FOAMGLAS® are based on historical experience and general site practice. They do not reflect individual examples. We therefore assume no liability as to the completeness and the suitability for a specific project. Furthermore, our liability and responsibility are subject to our general conditions of sale which are not extended either by this technical data sheet nor by the consulting of our technical sales representatives.

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