

# ECO<sup>2</sup> Metal Deck Roof

Economical + Ecological Roof Solution  
direct applied on corrugated metal deck

**FOAMGLAS<sup>®</sup>**  
Building

  
**DERBIGUM<sup>®</sup>**  
MAKING BUILDINGS SMART





**What can we do for you?  
... most efficient metal deck roof**

We are two international well known companies and agreed to promote together the **most economical and reliable flat roof solution** on metal deck.

Production facilities, storages, malls, and other steel structure buildings have often large roof areas and **need efficient and safe roof systems at an economical price**. We can offer it!

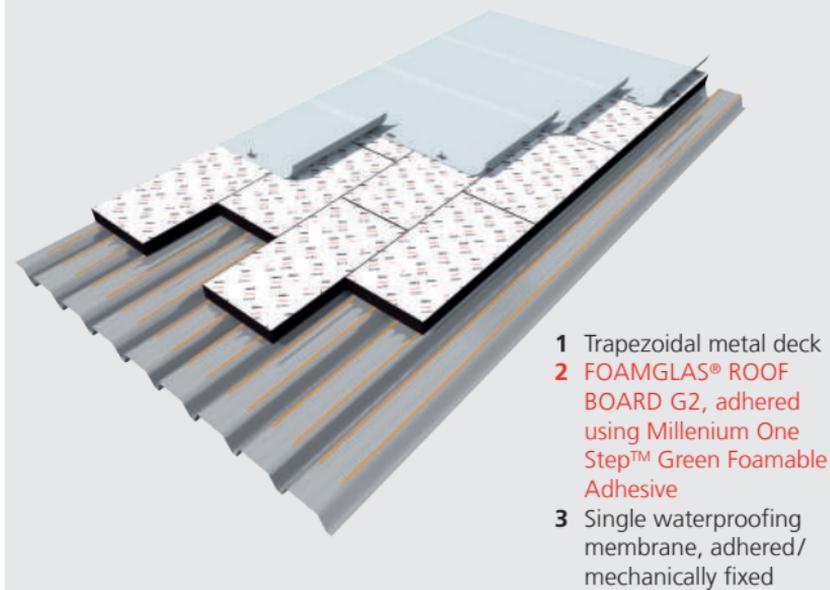
**Pittsburgh Corning Europe** is the world leader in cellular glass production and manufacturer of the thermal insulation FOAMGLAS.

**Derbigum** are the pioneers in ecological roofing solutions. With its baseline Making Buildings Smart, Derbigum offers clients smart roofing solutions to save energy , reduced CO<sub>2</sub> emission & produce renewable energy through their waterproofing membranes.

**Ecology and Economy** are the pillars of the success of both companies and so are the roofing systems we promote.

**Durability and Sustainability** are our basics principles combined with protection for Environment, Health and Safety for human being.





## What are the benefits for the customers? ... best combination of Economy + Ecology

**Economy** High durability, guarantees, few layers. Fast installation combines with long service life for the most economical solution.

**Light weight** The insulation can be applied directly onto the steel deck and carries the membrane directly. No additional layers are needed and still highest stability!

**Safety** Thermal insulation as well as the membrane provide the best protection against fire and humidity. Zero degradation of the thermal performance for generations.

**Durability** Proven records are showing the materials are still in perfect condition after 40 years of usage. Therefore we can provide up to 30 years of guaranty for our products.

**Flexibility** The way of fixing the insulation and the application of the membrane is flexible. Mechanically fixed or adhered with adhesive is possible.

**Design** Different surface finishes are available. Highest SRI, different colouring , metal roof optic or solar panels are possible.

**Sustainability** Approved and certified worldwide with many environment Awards the products contribute to the sustainable strategy and help gaining LEED® credits.



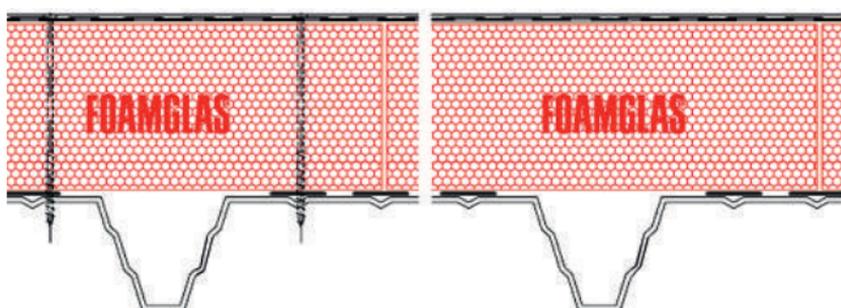
## FOAMGLAS® by Pittsburgh Corning ... the insulation that stays always new

FOAMGLAS® possesses **high rigidity and stability** and is **free from deformation in the long-term**. For any steel deck application FOAMGLAS® is the prime material. Due to the **high compressive strength** it considerably stiffens the roof system, reduces deflection, providing the optimal sub-ground to the weatherproofing membranes.

**Highly efficient**, very cost effective solution for industrial buildings and for commercial developments.

FOAMGLAS® is totally **impervious to water and vapour**, it will not absorb any water and will keep **lifelong** the performance. An additional vapour barrier is not required, as the closed cell glass insulation fulfills the function to keep moisture out.

Another quality of the glass material is the **non-combustibility** of the material itself, which makes FOAMGLAS® in fact the prime choice to fulfill the **highest fire safety standards**.





## VAEPLAN® by Derbigum

... synthetic membrane in various colours

This **synthetic membrane** VAEPLAN® is made with the VAESTOMERE-technology. The technology is based on a mix of acrylic polymers chemically bonded to the vinyl structure, which results in a **highly flexible and stable rubber copolymer**.

### Added value for your roofs

Standard **colours** are grey and white, but special colours are also available. These membranes provide the **best solutions** for lightweight, durable, aesthetic and ecological roofs.

### Fireproof

Moreover to the successfully passed fire tests B roof (t1), (t2), (t3), ... , the self-extinguishing property of the Vaeplan membranes is of vital importance in case of fire.

### Proven durability of 40 years

The specific composition guarantees long-term flexibility and no ageing occurs. Independent **durability studies on 40-year old** roofs have proven this.





## ECONOMY and ECOLOGY

... our duty and a must to comply!

**Derbigum and Pittsburgh Corning** have been investing for years in the development of **innovative ecological products** so that, together with our clients, we can do our part in the struggle against global warming.

**No matter what you choose**, the outcome is always **green!**

Using our products will **contribute to the LEED®** credits. FOAMGLAS® contains more than **60% recycling glass** and more than a quarter of Derbigum's resources are **recycled bitumen**.

Derbigum and Pittsburgh Corning are engaged in environmental stewardship. By analysing all processes, from the very first step in the production to the end of the lifecycle, considerable **savings** can be made, not only in terms of money but also in terms of ecological impact.

We believe in a strong partnership with our clients and craft industries and **support the project** from the beginning to the end with planning and specification assistance as well with job site instruction and training.

**Strong partnership and commitment** also means strong back coverage. We stand for best quality and prove it with our

**25 year guaranty**

for material performance. Please contact us to get the details.



## DERBIBRITE® NT by Derbigum ... option 1: lower surface temperature

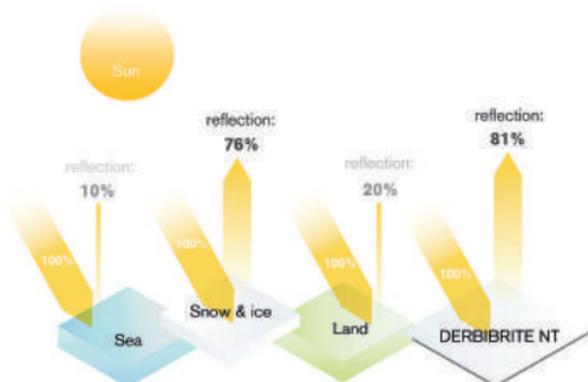
DERBIBRITE® NT is a **white reflective bituminous waterproofing** membrane, composed of a copolymer bitumen with new technologies which give it exceptional characteristics.

DERBIBRITE® NT is reinforced with a composite glass/polyester reinforcement, impregnated with an acrylic coating with a **high reflection capacity of SRI 100**.

By the way, the fire test certificates B roof (t1), (t2), (t3) and the self-extinguishing property are helping to reach the highest level in fire safety.

The functionality of the DERBIBRITE® NT as a **passive cooler** allows energy savings and reduces CO<sub>2</sub> release during its roof life. The white surface, which reflects up to 81% of the sun-rays, can decrease the roof surface temperature **by up to 50%** in peak summer, resulting in a lower indoor temperature.

Most efficiently DERBIRITE® NT can be torched-on directly to the surface of FOAMGLAS® READY BOARD.





## DERBISOLAR® by Derbigum ... option 2: flexible solar system finish

Derbigum is a world leader of amorphous solar panels on bismuthous membranes.

DERBISOLAR® combines a highly durable waterproofing membrane with integrated amorphous photovoltaic solar cells for generating electricity.

The base of DERBISOLAR® has a **white reflective acrylic coating** and guarantees a very long service-life and ensures a constant high output yield of the solar panels. The amorphous photovoltaic cells are adhered to the high-tech DERBISOLAR® base with a **25 year warranty**.

### Lightweight and flexible

- Minimal impact on the supporting structure (cell weight only 3.5 kg/sqm).
- Recyclable roofing membranes.

### Better performance, even in diffused lighting conditions

- With the integrated triple junction technology, the cells are capable of bridging overcast periods.

### No perforation of the roof

- No risk of leaks.

### Highly resistant

- The cells are built into composite materials unlike glass panels.



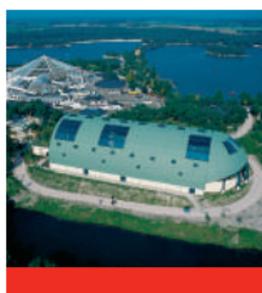


### **DERBICOLOR® by Derbigum** **... option 3: more colour and design**

The DERBICOLOR® FR, a **fire resistant membrane**, was developed through intensive research on the compatibility of raw materials. It unites a selection of the best bitumen and high-quality APP-TPO plastomers.

Thus it is auto-protected in the mass and has a **durability of more than 40 years**. It distinguishes itself from other DERBIGUM® membranes by its finishing layer in slate flakes (light grey and dark grey) or granules (burgundy brown and green) and a composite glass/polyester reinforcement, that gives it a strong tear and puncture resistance.

The fire test certificates B roof (t1), (t2), (t3) and the self-extinguishing property are helping to reach the **highest level in fire safety**.



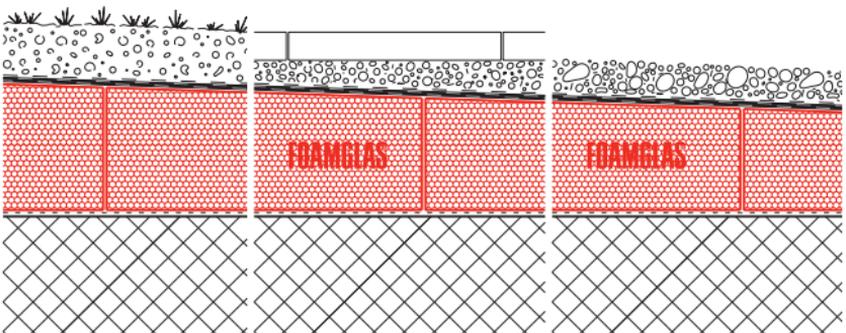


## FOAMGLAS® by Pittsburgh Corning ... option: slope insulation

FOAMGLAS® TAPERED Roof System has a cut-to-fall insulation and brings the slope without a screed. The system for flat roofs developed by Pittsburgh Corning is simply ingenious. The slope is according requirements, and various gradients are available. With FOAMGLAS® Tapered Roof System water can be drained off quickly and completely. No more problems with stagnant water.

There is **no need for concrete deck with falling gradient**. This saves time and building material. In addition the structure of the **roof is lighter and safer**. Long-term practical experience with the product has proven its effectiveness.

Pittsburgh Corning Middle East assists architects and engineers by our own CAD-Department and provides the FOAMGLAS® TAPERED roof design, based on the architect's site measurements. This service comprises estimation, calculation and installation plan, building site logistics and site assistance.





- 1 Waterproof
- 2 Vermin proof
- 3 High compressive strength
- 4 Non-combustible
- 5 Impervious to water vapour
- 6 Dimensionally stable
- 7 Acid and chemical resistant
- 8 Easy to cut
- 9 Ecological

## FOAMGLAS® by Pittsburgh Corning ... all benefits in one product

FOAMGLAS® cellular glass is a lightweight, rigid insulating material composed of millions of hermetically sealed glass cells, each an insulating space. This inorganic, all-glass, closed-cell structure provides **unmatched physical properties**, ideal for the building envelope.

FOAMGLAS® cellular glass insulation is the result of more than **70 years of proven performance** and continual product improvement by Pittsburgh Corning Corporation, the developer of cellular glass insulation.

FOAMGLAS® is **totally impervious to water and vapour**, it will not absorb any water and will keep lifelong performance. An additional vapour barrier is not required, as the closed glass cells keep moisture out.

FOAMGLAS® possesses **high compressive strength** and is free from deformation under load in the long-term. It can be used as a load-bearing thermal insulation without risk on roofs, decks, parking plazas, and below grade for foundations.

FOAMGLAS® is an **ecological product**, certified to standards of health and indoor air quality in buildings.

**FOAMGLAS® insulation will not burn**, because it consists of pure glass (ASTM E 136). It does not contain any blowing agents or flame retardants. Fire behaviour: Classification according to ASTM E 84, smoke development and flame spread – zero.

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**Pittsburgh Corning Europe**

Rep. Office Middle East  
Arenco Tower, Media City  
P.O. Box 213345  
Dubai U.A.E.  
Phone +971 4 434 7141  
Fax +971 4 432 7109  
info@foamglas.ae  
www.foamglas.com

**DERBIGUM Middle East**

702, Al Thuraya Tower 2, Media City  
P.O. Box 500717  
Dubai U.A.E.  
Phone +971 4 4280 770  
LFE@derbigum.com  
www.derbigum.com/me