

ECO² Metal Deck Roof

Economical + Ecological Roof Solution
direct applied on corrugated metal deck

FOAMGLAS[®]
Building


DERBIGUM[®]
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!

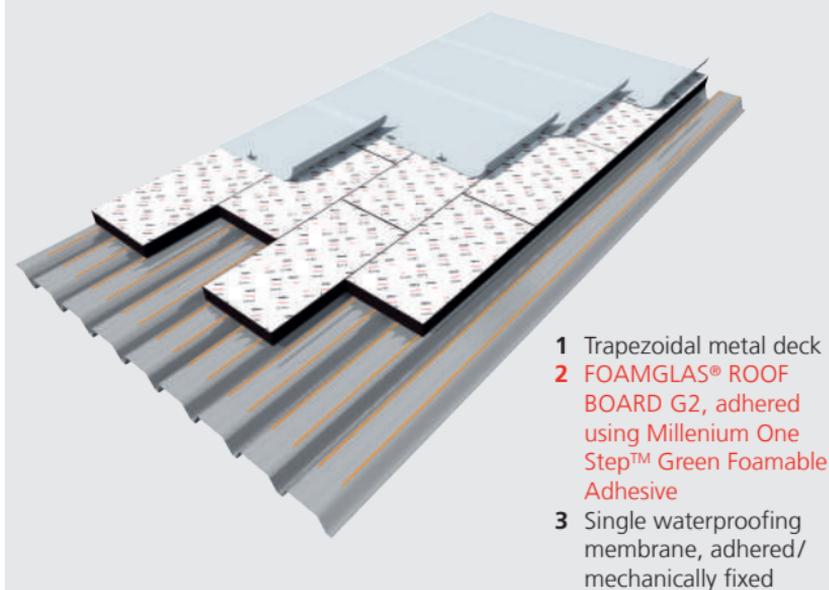
Pittsburgh Corning Europe is the world leader in cellular glass production and manufacturer of the thermal insulation FOAMGLAS.

Derbigum are the pioneers in ecological roofing solutions. With its baseline Making Buildings Smart, Derbigum offers clients smart roofing solutions to save energy , reduced CO₂ 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.





- 1 Trapezoidal metal deck
- 2 FOAMGLAS® ROOF BOARD G2, adhered using Millenium One Step™ Green Foamable Adhesive
- 3 Single waterproofing membrane, adhered/mechanically fixed

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.



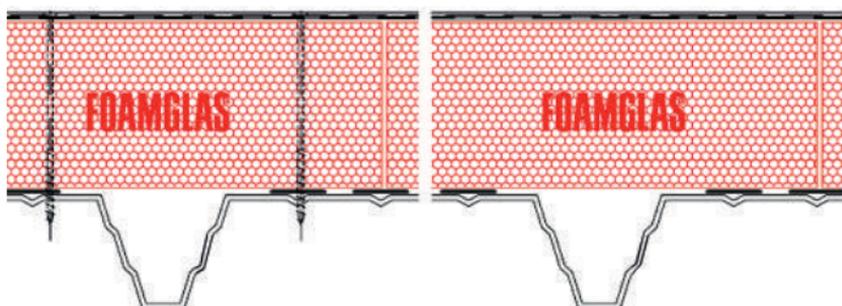
FOAMGLAS® by Pittsburgh Corning ... the insulation that stays always new

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

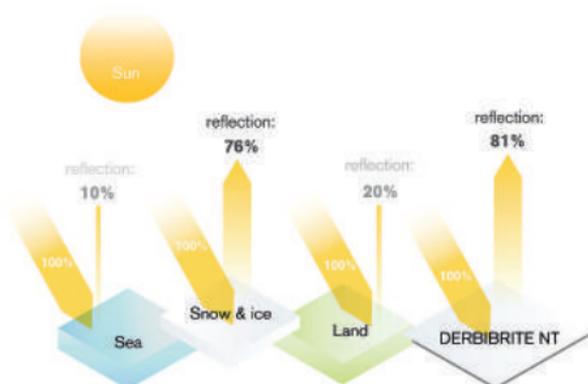
DERBIBRITE® NT is a **white reflective bituminous waterproofing** membrane, composed of a copolymer bitumen with new technologies which give it exceptional characteristics.

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 CO₂ 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.



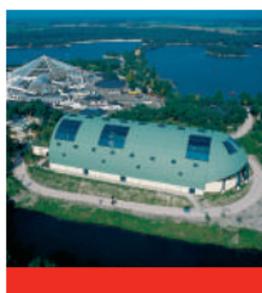


DERBICOLOR® by Derbigum **... option 3: more colour and design**

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**.



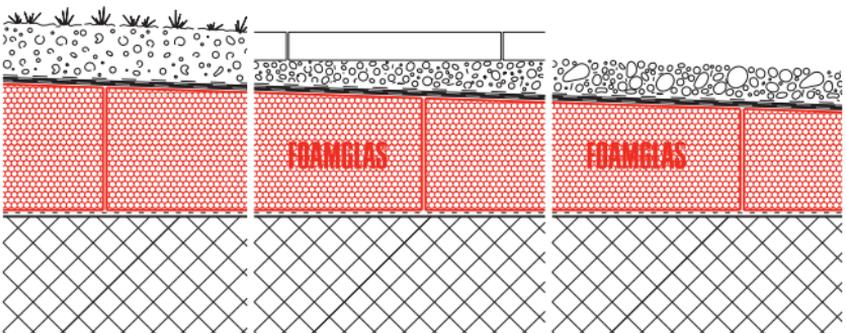


FOAMGLAS® by Pittsburgh Corning ... option: slope insulation

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