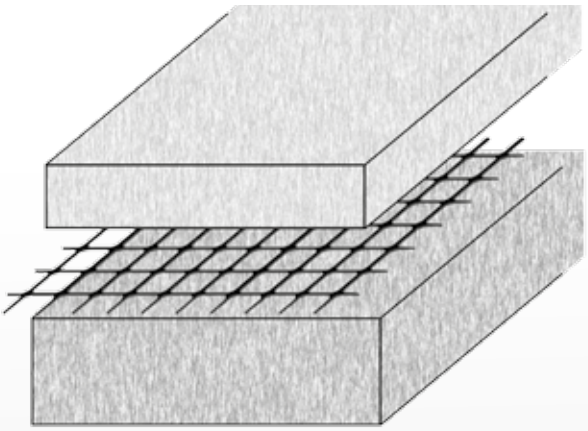
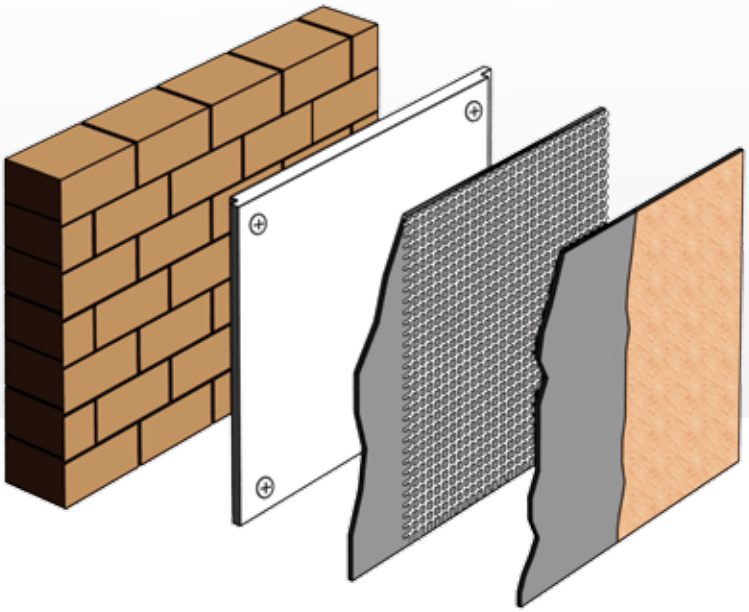
Freudenberg Politex
Building ReEvolution

# GlassPAR

## Fiberglass nets





## Reinforcement for walls

- resistant to hydrometric variations
- stable at working temperatures
- excellent mechanical strength
- rot-proof

## Reinforcement for floors and road surfaces

We build the future  by recovering the past

## INTRODUCTION

A fiberglass net is the product obtained by interweaving a certain number of glass threads in such a way as to achieve a mesh of variable dimensions.
By its intrinsic nature, the net ensures a high level of resistance to temperature and hydrometric variations and to tensile stress.
Nets of the **Glass**PAR family may be used as reinforcement in several construction systems:
- **Glass**PAR**Net** for plasters, designed to withstand the basic attack of cement mortar;
- **Glass**PAR**Floor** for oversite concrete;
- **Glass**PAR**Road** for road surfaces, impregnated with bitumen and made adhesive on one side to ensure perfect integration in the various layers of the roadway.

# GlassPARNet

## Reinforcement for plasters

## EXTERNAL WALL INSULATION

A healthy home starts with effective protection of the interior spaces.
A house that loses energy cannot guarantee the well-being of the people who live in it, and the building as a whole cannot be considered "**energy-efficient**".

The design of the thermal insulation of the outer cladding therefore plays an important role.

The most commonly used system for this purpose, in the case of new buildings, and above all in the renovation of old buildings, is the cladding system, which consists in applying insulation in external walls.

A well-implemented cladding system is effective because:
- it protects the walls from temperature changes;
- it eliminates "thermal bridges".

This is the only way to achieve energy-efficient buildings that conform to the latest energy saving regulations.
When integrated within the cladding system and buried between the layer of plaster that protects the insulation and the finishing coat of the wall, **Glass**PAR**Net 165** makes the surface tough and resistant, limiting the stress created by sudden changes of temperature, shrinkage and expansion.
This prevents cracks and splits forming in the façade with a risk of damaging water infiltration.

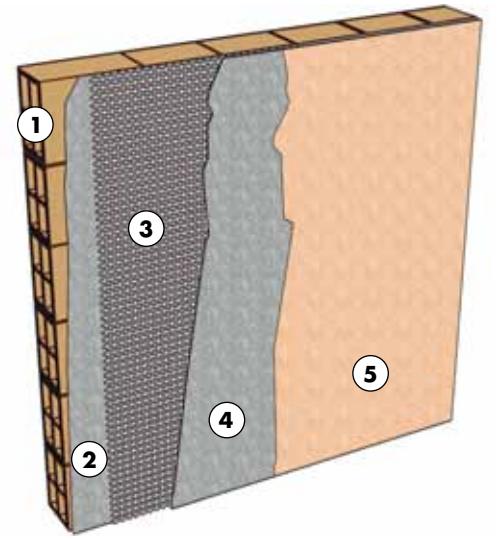
## LAYING INSTRUCTIONS

After laying the sheets of insulation, apply a first coat of smoothing plaster in which the alkaline-resistant **Glass**PAR**Net 165** is then buried, with an overlap of at least 10 cm between adjacent sheets of nets.
Then proceed to apply the finishing coat.

→ **Glass**PAR**Net 165** for cladding systems conforms to the ETAG 004 guidelines.

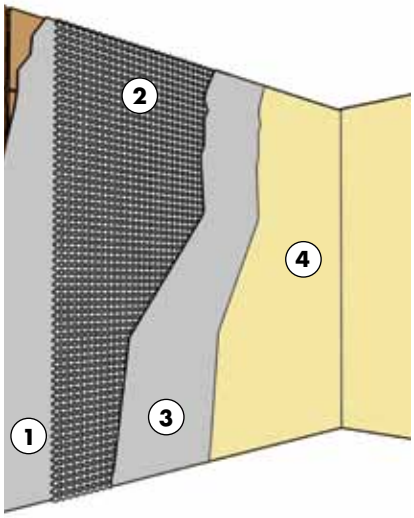
## REINFORCEMENT OF PLASTERWORKS

Cracks and micro-fissures can form in inside and outside plaster of various grain sizes.
**GlassPARNet 75** and **GlassPARNet 110** are ideal reinforcements for keeping the surfaces intact. The loose mesh version is suitable for holding rough surfaces together, while the tight mesh version is designed for smooth surfaces and fine plaster.




### External wall

1. Load-bearing wall
2. Smoothing layer
3. **GlassPARNet 110** 10x10 mm
4. Plaster finish
5. Paint

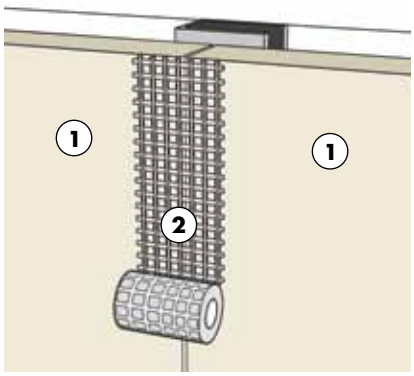



### Internal wall

1. First layer of plaster
2. **GlassPARNet 75** 5x5 mm
3. Second layer of plaster
4. Paint

## DRY SYSTEMS

**GlassPARNet 60 adhesive net tape** is specially designed for "dry" systems, used mainly for indoor applications. It is placed over the joints between plasterboard panels and serves to prevent unsightly cracks.




### Inside plaster

1. Plasterboard panels
2. **GlassPARNet 60** adhesive

# GlassPARNet

## TECHNICAL DATASHEET

| | | GlassPARNet | | | | |
|---|---|---|---|---|---|---|
| | | **75** | **110** | **165*** | **60 ADH.** | **U. o. M.** |
| **Weight** | with resin | 75 | 110 | 165 | 54 | g/m² |
| | only glass | 61 | 85 | 135 | 44 | |
| | adhesive | - | - | - | 8 | |
| **Mesh size** | | 5x5 | 10x10 | 4x4 | 2,9x2,9 | mm |
| **Composition** | glass | 82 | 82 | 82 | 68 | % |
| | resin | 18 | 18 | 18 | 19 | |
| | adhesive | - | - | - | 13 | |
| alkhali resistant resin | st-acr | 30 | 30 | 30 | - | |
| | acr | 70 | 70 | 70 | 100 | |
| **Glass filaments** | MD<br>CD | 7<br>17 | 20<br>50 | 14<br>30 | 3<br>6,5 | dtex |
| **Tensile strength at break** | MD<br>CD | 900<br>750 | 1050<br>1050 | 1950<br>1800 | 500<br>550 | N/5cm |
| **Elongation at break** | MD/CD | 3,6 | 3,6 | 3,6 | 4 | % |

*ETAG 004

## SUPPLY CHARACTERISTICS

| | GlassPARNet | | | | |
|---|---|---|---|---|---|
| | **75** | **110** | **165** | **60 ADH.** | **U. o. M.** |
| **Width** | 100 | 100 | 110 | 5 | cm |
| **Length** | 50 | 50 | 50 | 90 | m |
| **Roll surface** | 50 | 50 | 55 | 4,5 | m² |
| **Quantity per pallet** | 2100 | 1200 | 1650 | n. a. | m² |
| | 54 | 30 | 30 | 864 | n. of rolls |
| | n. a. | n. a. | n. a. | 36 | n. of boxes |
| **Quantity per box** | n. a. | n. a. | n. a. | 24 | n. of rolls |

ed. January 2010

**Freudenberg Politex Group** - Headquarters: Str. Prov. Novedratese 17/a, 22060 Novedrate (CO), Italy
Phone: +39 031 793 111 - Fax: +39 031 793 202 - www.freudenbergppolitex.com - bm@politex.it

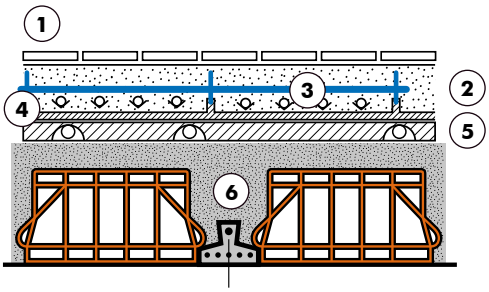
# GlassPARFloor

## Reinforcement for floors

Inside floors, though not subject to the deterioration caused by adverse weather conditions, may get cracked due to sagging of the structure of the building. The damage caused may be extremely serious, if the sagging takes place in the oversite concrete as it may become disrupted and lead to cracks in the finished flooring. The presence of technical systems below the oversite concrete may complicate the situation even further.

It is therefore extremely important to adopt stratigraphic solutions, as early as in the design phase, to increase the mechanical strength of the oversite concrete.

**GlassPARFloor** is an alkaline-resistant fiberglass net, made of high-quality yarn, which optimizes load distribution, thus strengthening the oversite concrete and reducing shrinkage to a minimum.
The use of **GlassPARFloor** is recommended in particular for radiating floors, traditional oversite concrete and in the presence of loose stone foundations.
The nature of the product makes it easier and quicker to lay compared to traditional oversite concrete nets.

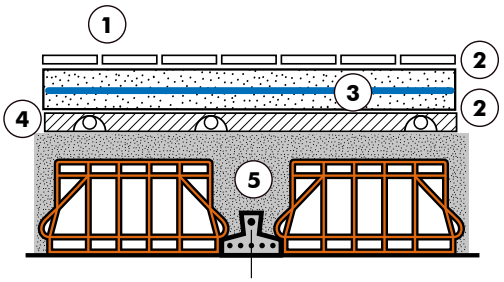



**Radiating floor**

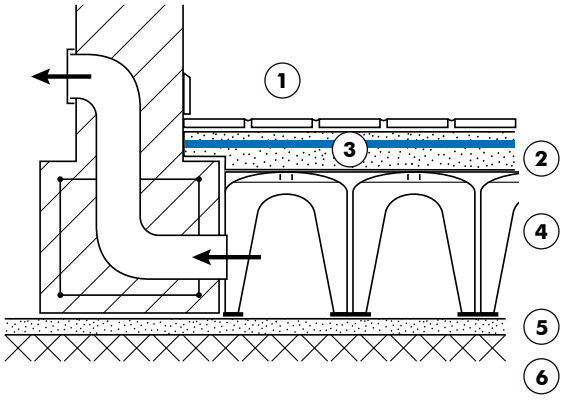
1. Tiles
2. Self-levelling oversite concrete
3. **GlassPARFloor**
4. Heating system
5. Technical systems
6. Clay block floor slab

**Traditional floor**

1. Tiles
2. Light-weight oversite concrete
3. **GlassPARFloor**
4. Technical systems
5. Clay block floor slab




Note:
**GlassPARFloor** has to be laid before the layer of light-weight concrete (2 cm ca.) to ensure total adherence to the surface. The completing layer is then cast (3 cm min.).




**Loose stone foundations**

1. Floor
2. Oversite concrete
3. **GlassPARFloor**
4. Loose stone foundation
5. Raft foundation
6. Ground

# GlassPARFloor

## TECHNICAL DATASHEET

| | | GlassPARFloor | |
|---|---|---|---|
| | | | **U. o. M.** |
| **Weight** | | 200 | g/m² |
| **Mesh size** | | 40 x 40 | mm |
| **Composition** | | Glass net (84%), alkhali resistant resin (16%) | |
| **Glass filaments** | MD/CD | 3400 | dtex |
| **Tensile strength at break** | MD<br>CD | 2100<br>2200 | N/5cm |
| **Elongation at break** | MD/CD | 3,5 | % |

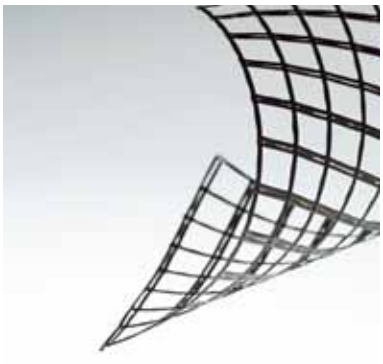
## SUPPLY CHARACTERISTICS

| | GlassPARFloor | |
|---|---|---|
| | | **U. o. M.** |
| **Width** | 100 | cm |
| **Length** | 50 | m |
| **Quantity per pallet** | 16 | n. of rolls |
| | 800 | m² |

ed. January 2010

# GlassPARRoad

## Reinforcement for road surfaces



The infrastructure in highly industrialized countries, must ensure a high performance in order to respond to the demanding needs of today's heavy-duty transport and ever-increasing volumes of traffic.
In the design of roadways, it is therefore necessary to adopt advanced construction technologies, using technically valid materials capable of prolonging the life of the road surface at the lowest possible cost.

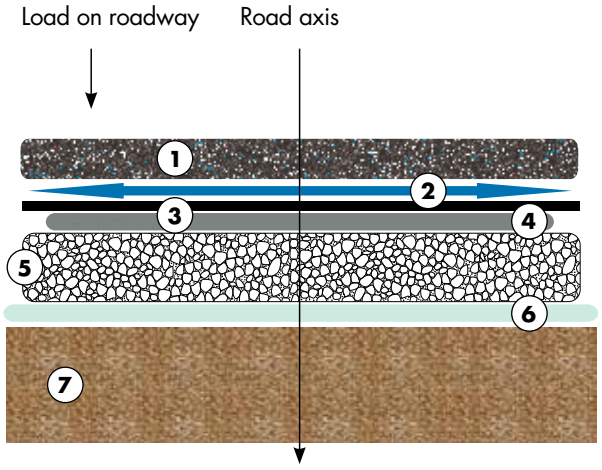
The deterioration of a road surface is principally attributable to the following factors:
- increase in traffic
- increase in loads per vehicle
- broadened tyres

which reduce the bearing capacity of the roadway, leading to cracks and ruts, even in the deeper layers.
The use of road nets to reinforce road paving can prolong the average life of a road surface by up to 50%.

Freudenberg Politex offers **GlassPARRoad**, its new range of fiberglass nets impregnated with bitumen for reinforcing road surfaces.

**GlassPARRoad** integrates perfectly with the various components of the road surface due to the following characteristics:
- its versions, which vary in weight and mesh size, enable the right product to be chosen according to the type of road and performance required;
- the mesh covered with a bituminous mix provides a better compatibility with the asphalt, thus increasing the cohesion between the layers of conglomerate;
- the mesh made with adhesive on one side with acrylic bonding agent offers further adherence, in particular to the binder;
- its ease of application speeds up the laying procedure, thus reducing the impact of road works on traffic.

The technical characteristics that distinguish **GlassPARRoad** are its high tensile strength and modulus of elasticity with limited elongation. Its use within the road surface prevents cracks forming, reduces deformation and increases the bearing capacity of the bituminous conglomerate.




1. Top layer subject to wear (4 cm)
2. **GlassPARRoad**
3. Primer
4. Bituminous tout-venant (6 cm)
5. Base (compacted draining layer)
6. **Drenotex** geotextile
7. Sub-base

# Glass PAR Road

## LAYING INSTRUCTIONS

To lay the net, proceed as follows:

- lay the net uniformly across the full width of the road, from one edge to the other to avoid breaks;
- level out the tout-venant uniformly to avoid warping of the net itself;
- lay the top layer (fine bitumen) to a thickness of about 4 cm.

The use of **Glass PAR Road** as an alternative to metal nets offers the following advantages:

- it does not interfere with or cause damage to the machine tools during road surface milling and renovating works;
- it does not create any safety problems to transiting vehicles if underlying material emerges on the road surface;
- it can easily be shaped during laying and adapted to movements of the base.

## TECHNICAL DATASHEET

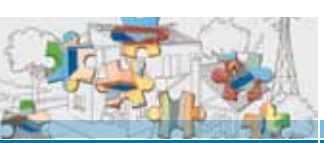
| | | Glass PAR Road | | | | | |
|---|---|---|---|---|---|---|---|
| | | **175** | **310** | **395** | **520** | **1000** | **U. o. M.** |
| **Weight** | | 180 | 310 | 400 | 525 | 1050 | $g/m^2$ |
| **Mesh size** | | 25,4 x 25,4 | | | 12,5 x 12,5 | | mm |
| **Composition** | | Bitumen coated glass scrim, with adhesive acrylic glue on the back | | | | | |
| **Minimal melting temperature** | | 218 | | | | | °C |
| **Tensile strength at break** | MD<br>CD | 30<br>30 | 50<br>50 | 80<br>80 | 100<br>100 | 120<br>200 | kN/m |
| **Elongation at break** | MD/CD | <4 | <4 | <4 | <4 | <5 | % |

## SUPPLY CHARACTERISTICS

| | Glass PAR Road | | | | | |
|---|---|---|---|---|---|---|
| | **175** | **310*** | **395** | **520*** | **1000** | **U. o. M.** |
| **Width** | 150 | | | | | cm |
| **Length** | 100 | 100 | 100 | 100 | 50 | m |
| **Quantity per pallet** | 9 or 6 | 9 or 6 | 6 or 4 | 6 or 4 | 8 or 6 | n. of rolls |
| | 1350 or 900 | | 900 or 600 | | 600 or 450 | $m^2$ |

*Products always available in the warehouse

ed. January 2010



**Freudenberg Politex Group** - Headquarters: Str. Prov. Novedratese 17/a, 22060 Novedrate (CO), Italy
Phone: +39 031 793 111 - Fax: +39 031 793 202 - www.freudenbergpolitex.com - bm@politex.it