

# POLYFIN<sup>®</sup>

## THE WATERPROOFING MEMBRANE MADE OF FPO/TPO



**POLYFIN Italia**  
**s.r.l.**



# GEOSYNTHETIC MEMBRANE

## Some product

**EPDM:** ethylene-polypropylene-diene-monomer (vulcanized)

- good resistance to atmospheric agents
- good flexibility even at low temperatures
- high difficulty of welding hydraulic seal
  - difficulty of repair

**HIPALON:** chlorosulfonated polyethylene

- good resistance to atmospheric agents
- good flexibility even at low temperatures
  - difficulty of curing repair occurred
    - high cost

**EVA:** ethyl vinyl acetate

- good flexibility even at low temperatures
  - good mechanical resistance
    - expensive price

**PVC:** Polyvinyl chloride (plastic):

- good resistance to weathering
- good flexibility even at low temperatures
  - good workability
- premature aging to loss of plasticizers

**FPO / TPO:** Flexible polyolefin:

- good resistance to atmospheric agents
- good flexibility even at low temperatures
  - quite good machinability
- prolonged persistence of the initial characteristics

# GEOSYNTHETIC MEMBRANE : the greatest differences

	<b>Polyolefins (FPO-TPO-FPA)</b>	<b>PVC-P</b>
Dimension Stability	Excellent thanks to the absence of plasticizers	Penalized by presence of plasticizers, which emigrates while exposed under UV rays
Work safely	No solvent, no toxic fumes	Solvent to clean before application, toxic fumes during app, special equipment for indoor app
Technical solution	Suitable for a wider range of subbase	Can not be used in touch with some insulation panels (hidden costs)
Application	Easy and fast to install	Fast installation
Reparation	Cleanin the old Polyfin with water & soap, only if request, and then weld	Scratch the overlap area of the old PVC-P and apply a solvent before welding
Disposal material	Totally recyclable	Special waste
Life expectancy	Above 20 years in any conditions	Around then 10 years depending on the formulation of the PVC-P sheet if exposed to the UV rays



## DEFECTS ON PVC DIMENSIONAL STABILITY

TPO



PVC



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## POLYFIN® - THE WATERPROOFING MEMBRANE MADE OF FPO/TPO

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Polyfin® is a synthetic high quality single ply membrane, consisting of Flexible Thermoplastic Polyolefines (FPO/TPO). This is, from an ecological perspective, an environmentally sound and superb product. It is easy to handle in installation which is important from the viewpoint of a craftsman.

Polyfin® is an extremely environmentally friendly material and easy to install. Polyfin is a product manufactured to the highest standards of quality and visually attractive as it is available in a range of colors. Additionally, Polyfin® is compatible with bituminous roofing and polystyrene insulation, which makes it ideal for both new construction and refurbishment projects.

Polyfin® is suitable for all types of flat roof constructions and can be installed through various methods such as mechanical fixing or adhesive bonding. Furthermore, it can be used in other structural waterproofing applications such as foundations, cellars, basements and underground car parks.

In today's market, environmental considerations and sustainability are becoming increasingly important, making Polyfin® the ideal choice.

If you need an ecologically acceptable product, Polyfin® will give you everything you require as proved by our Environmental Product Declarations (EPD) made in accordance with ISO 14025 and EN 15804 published by Institut für Bauen und Umwelt e.V (IBU - Institute for Construction and Environment).

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## POLYFIN® WILL BRING YOU FURTHER ADVANTAGES TAILORED TO YOUR INDIVIDUAL REQUIREMENTS.

### Ecological

The production of Polyfin® is completely environmentally acceptable as it incorporates no chemicals such as plasticizers, halogens e.g. as chlorine or bromine that are harmful to the environment. Polyfin® is an entirely PVC and plasticiser free product. Also in installation on the roof, the hot air welding of the seams releases no toxic or dangerous substances. Furthermore, no solvents are required for preparing the welds. For green roofs there is a further advantage that Polyfin® is root and rhizome resistant in acc. to official standards, so requires no further root resistant additive. Polyfin® has been tested for this application in accordance with the FLL testing standards. As Polyfin® is inert, it does not react with other materials, so it can be safely used for potable water applications in accordance with the KTW Guidelines. It has been tested and approved by an accredited institute.

### Flexible

Because Polyfin® is so flexible it is ideal for use on complex roofs as it can be formed to almost any shape. As Polyfin® has good expansion characteristics, it can accommodate all building movements due to thermal expansion and contraction.

### Coloured

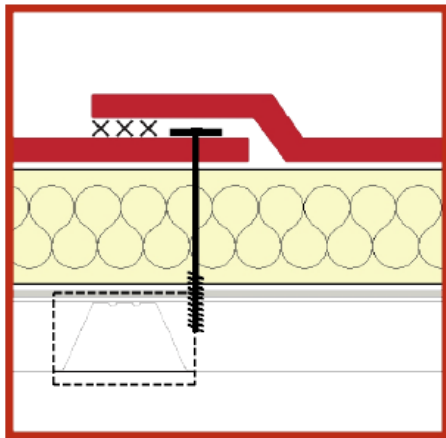
Due to its product features Polyfin® is not only very flexible, but also gives you a lot of leeway with your work. In addition to our standard colours we offer a wide range of special colours. This opens up many new opportunities for you in designing your projects.

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BITUMEN AND POLYSTYRENE COMPATIBLE • ROOT AND RHIZOME RESISTANT TO FLL-TESTING METHOD • TESTED RESISTANCE TO FLYING SPARKS AND RADIANT HEAT FOR CONVENTIONAL ROOF STRUCTURES • SIMPLE INSTALLATION AND HANDLING • NO SUBSEQUENT SEALING OF THE SEAM EDGES REQUIRED

CONVINCE YOURSELF OF THE MANY POSSIBLE APPLICATIONS OF  
POLYFIN®

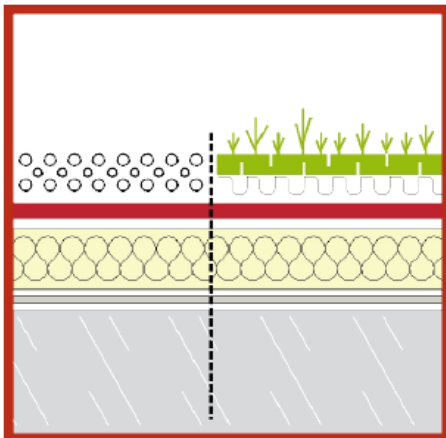
ECONOMICAL SOLUTIONS FOR EVERY ROOF BUILD UP



MECHANICALLY FASTENED

Polyfin® 3025  
Polyfin® 3020  
Polyfin® 3018  
Polyfin® 3016  
Polyfin® 4230

Polyfin® 4020 v  
Polyfin® 4018 v  
Polyfin® 4015 v



LOOSE LAID AND BALLASTED

Polyfin® 3025  
Polyfin® 3020  
Polyfin® 3018  
Polyfin® 3016  
Polyfin® 4230

Polyfin® 4020 v  
Polyfin® 4018 v  
Polyfin® 4015 v



## Installation equipment:

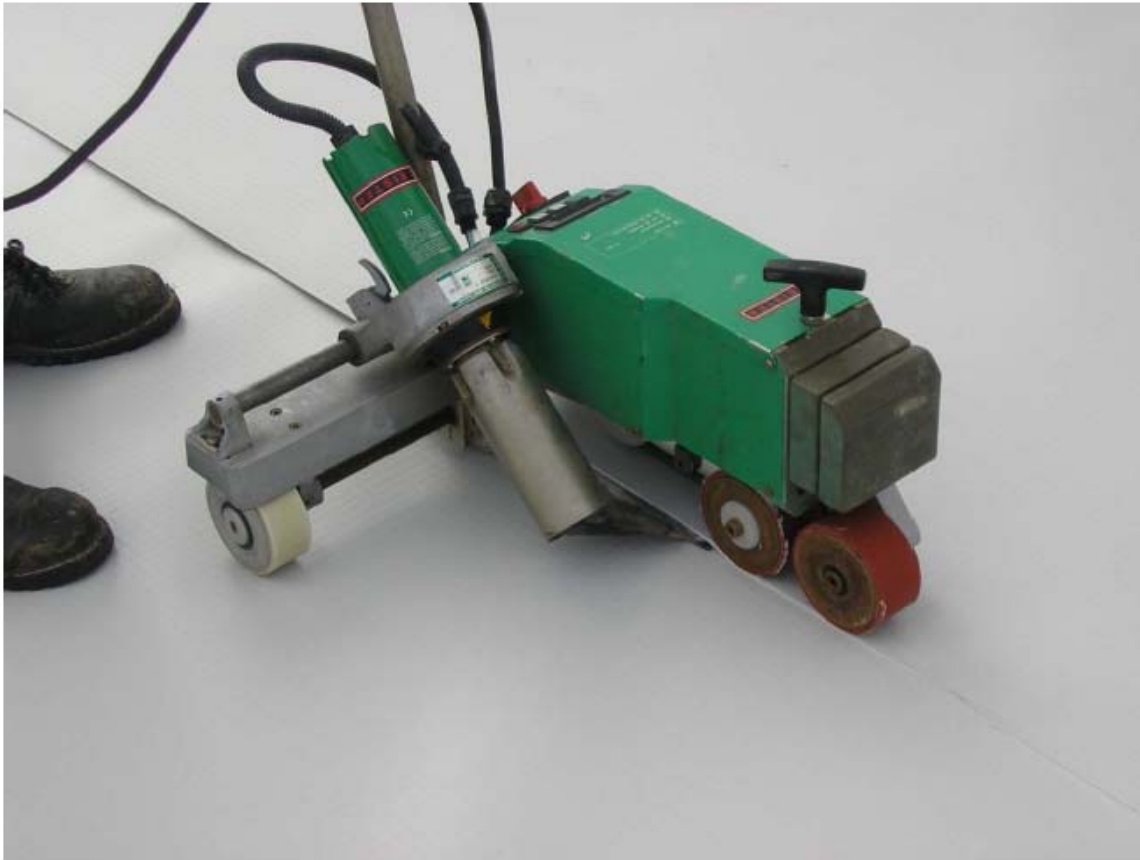
- In principle the same like for PVC membranes
- You musn't use a „grip nozzle“ or „prep nozzle“!





## APPLICATION OF TPO

AUTOMATIC WELDING MACHINE



MANUAL WELDING MACHINE



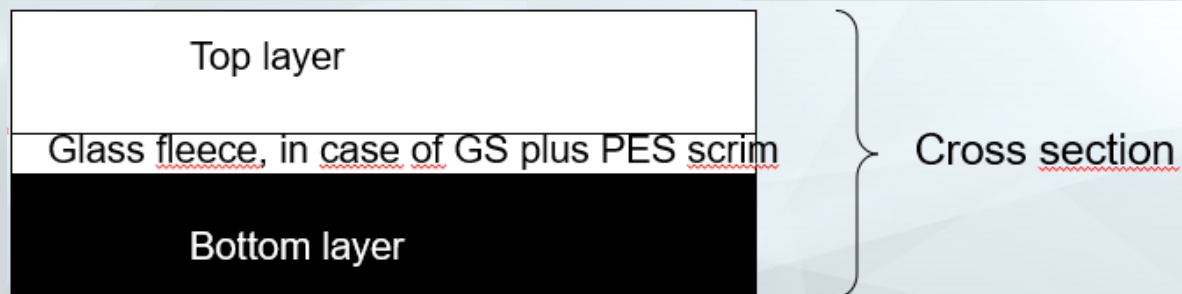
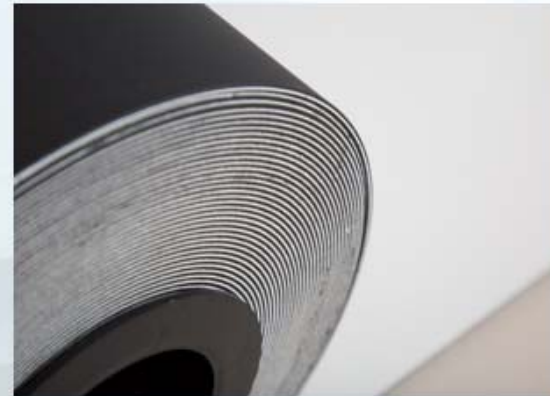
# FPO

## Polyfin Duo®

**With glass fleece reinforcement**

Polyfin Duo® 3015, 3018, 3020 (1.5 mm to 2.0 mm)

Range of application: Mechanically fixed or ballasted

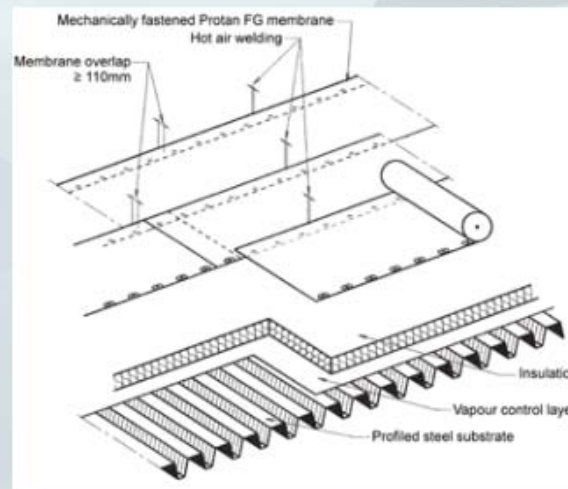


+ More competitive at big projects

+ White surface as standard (good, if a high SRI value is requested)

## Build ups with Polyfin Duo

- To consider:
  - External fire performance
  - Compatibilities with other materials
  - Root resistance in case of roof gardens
  - Tested fasteners in the matter of mechanically fixed build ups



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**THE WATERPROOFING  
MEMBRANE MADE OF FPO/TPO**

**THANK YOU**