

**Monarfin<sup>®</sup>**  
Durable TPO waterproofing systems





Durable - > decades of experience

Fast application

Flexible methods of application

High reflection values

Easy to use

# Monarfin®

## High performance TPO

waterproofing systems  
designed to meet **today's**  
**standards**

**The Icopal Group continues to invest in the development and manufacture of synthetic single ply technology with the introduction of TPO waterproofing membranes under the brand name Monarfin. Manufactured from flexible polyolefins, Monarfin combines excellent physical product characteristics with superior quality and handling capabilities.**

Monarfin incorporates a reinforcement which is encapsulated between two layers of flexible polyolefin membrane. The homogeneous membrane created offers excellent mechanical properties whilst maintaining flexibility in use. Monarfin membranes are designed for flat, curved and low pitched roofs. Advanced polymerisation technology combines the durability and wearing properties associated with TPO membranes with excellent heat welding characteristics. Compatible with a wide range of materials and good chemical resistance, Monarfin can provide the ideal choice for existing and new roofs and can be mechanically fixed, fully adhered or loose laid and ballasted. Monarfin membranes have been tested for fire performance according to local requirements.

### Durable

Excess materials generated during the manufacturing process are ground into small pellets and recycled. Monarfin membranes do not contain liquid plasticizers and further to this, it is understood that Monarfin membranes can also be recycled at the end of their long useful life, eliminating the environmental impacts associated with landfill.

Monarfin provides exceptional weather resistance and protection against all temperature extremes. Monarfin is UV resistant and remains virtually unchanged throughout its serviceable life.

The Icopal Group has decades of experience, when it comes to producing TPO roofs. And these roofs that were created a long time ago (for instance a roof installed in Goirle, Netherland, in 1998) still look as new nowadays.



### Easy and quick installation

Monarfin is fit for almost every type of roof system: mechanically fixed, fully adhered, inverted roof system and warm ballasted roof system. This versatility ensures a lot of freedom whilst designing the roof construction. Regardless the installation method, with Monarfin you can count on a quick – hence cost reducing – installation. The material is welded with hot air, so the installation process is also safe. Monarfin can be used throughout the whole year! Because of this Monarfin is seen as very user friendly.

### Compatibility

Monarfin roof membranes can be installed on all major roof deck types such as plywood, timber boards, profiled metal, concrete and cementitious screeds and is not affected by direct contact with commonly used roofing materials such as old bitumen, asphalt, polystyrene or rubber. This makes Monarfin the ideal membrane for refurbishing existing roofs.

### Security in Application

Adjoining sheets of Monarfin are fused together by hot air welding. Monarfin exhibits a good “welding window” allowing perfect welds to be produced over a broad temperature range and in several weather conditions

making the membrane very user friendly.

### Cool Roof: high reflection values

Monarfin is available in a special reflective color. This finish reflects the heat from the sun, which cools the roof surface and the space underneath. The cooling effect is indicated with a SRI (Solar Reflectance Index) value. Monarfin SRI white has a high indicative SRI value of more than 100.

An TPO cool roof has several advantages that separates the membrane from traditional waterproofing products:

- Save your money reducing the energy needed;
- Add value to your building;
- Increase the lifespan of waterproofing;
- Help the environment by reducing the urban heat island effect.

### Colours



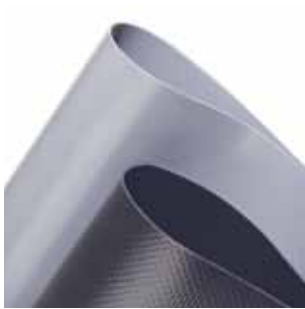
RAL colours for indication only. Consult with us for availability.



# Monarfin® Product Range

The Monarfin range has been designed to ensure total compatibility and ease of application playing a vital role in achieving the total integrity of the waterproofing system. With Monarfin W you easily weld an anti-slip walkway on Monarfin roof membrane. Monarfin D is an un-reinforced TPO membrane for details to be formed on-site. Together with other accessories it forms a complete assortment. Membranes and accessories are available in grey, anthracite and SRI-white as standard. Separate production information sheets on all products are available upon request.

## Monarfin® Waterproofing Membranes



### Monarfin FM

Monarfin FM is a glass-fibre reinforced membrane designed specifically for use within mechanically fixed applications. Its inherent tensile strength facilitates the use of steel fasteners to restrain the system against wind uplift. Mechanically fixed systems can be cost effective solutions, and are ideal where lightweight constructions are considered.

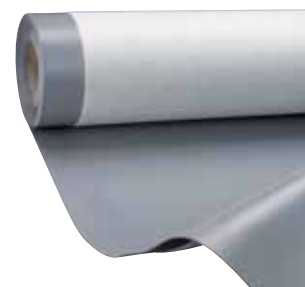
Thickness: 1.2mm / 1.5mm  
Width: 1.06m / 1.5 m / 2.12m  
Roll lengths: 15m / 20m  
Colour: Grey / SRI White / Anthracite



### Monarfin G

Monarfin G incorporates a glass reinforcement encapsulated between two layers of extruded TPO. The membrane specifically designed for use within ballasted warm or green roof constructions where the membrane is buried. Monarfin G can provide a long lasting waterproof solution for roof areas that need to be waterproofed fast.

Thickness: 1.5mm / 1.8mm  
Width: 2.12m  
Roll length: 15m  
Colour: Grey



### Monarfin GF

Monarfin GF is glass stabilized TPO membrane incorporating a polyester fleece backing. The factory laminated polyester backing allows the membrane to be fully or partly adhered to the underlying substrate using a compatible cold applied adhesive and can be the ideal solution on curved, steep or undulating roof designs that prove challenging for other systems.

Thickness: 1.5mm + fleece  
Width: 2.12m  
Roll length: 15m  
Colour: Grey

*Other thicknesses (1,8 and 2,0), widths and colours available upon request.*



# Monarfin® Accessories

For the most recent portfolio information, please contact us.

## Monarfin Prefabricated Corners

Prefabricated corners aid speed of installation on site, and are used to reinforce internal and external corners with no stretching or cutting required.



## Monarfin D Unreinforced Flashing

The Monarfin D unreinforced flashing is to be used in the formation of internal/ external corners, field fabricated pipe flashings, sealant pockets and scuppers, when the use of pre-moulded accessories are not feasible.

Thickness: 1.5mm. Dimensions: 1,4 m x 15 m.



## Monarfin W Walkway Membrane Red

Monarfin W is a TPO anti-slip walkway on a roll, with an embossed deep interlocking herringbone tread pattern to the upper surface.

Thickness: 2.5mm. Dimensions: 0,74 m x 15 m.



## TPO Contact Adhesive

It is a high strength solvent based contact adhesive that allows the bonding of Monarfin® nonfleeceback membrane to various porous and non-porous substrates. The adhesive provides instant contact adhesion and is particularly useful at details such as upstands and abutments.

Can: 20 L



## Fleeceback Adhesive (fully bonded): TEROSON AD 3958

Teroson AD 3958 is a high strength, single component moisture curing polyurethane adhesive that has been formulated for bonding fleece-backed single ply roofing membranes to various substrates including suitable roof insulation panels.

The cured adhesive film has very good resistance to heat and hydrolysis, and is blue/ green in appearance.

Can: 9,5 KG



## Monarfin TPO coated metal sheet

Hot dipped galvanised steel sheet of 0.6 mm coated with a layer of 0.6 mm nonreinforced TPO film for an overall thickness of 1.2 mm. The sheet is cut into appropriate widths and used to fabricate metal drip edges or other roof perimeter edging profiles.

Dimensions: 2 x 1 m



# Methods of **application**

**With today's construction trends of highly intricate and complex structures and the requirement for higher thermal insulation values, only membranes which aspire to the highest quality standards and possess unquestionable technical properties, will be considered in the design process. The versatility of Monarfin ensures the designer total freedom and security when specifying the roof waterproofing system.**

## **Mechanically Fastened System**

Mechanically fixed systems are often favoured above timber or metal decks where the exposure of the fastener on the underside of the structure is not a consideration. This method of application involves the use of thermally broken fasteners fixed at pre-determined centres and is a fast and cost effective method of installing the single ply membrane which is less dependent upon amicable weather conditions.

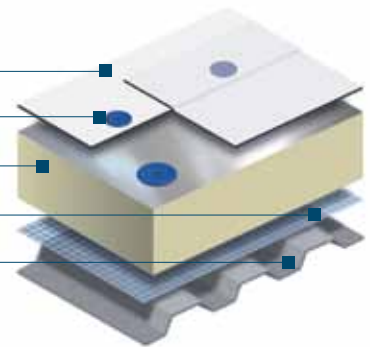
Monarfin® FM membrane

Fasteners

Thermal insulation

Siplast vapour control layer

Structural deck



Monarfin® GF

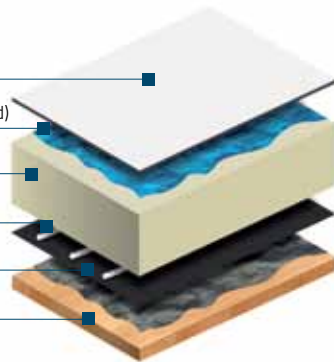
Icopal fleeceback adhesive (fully/partly bonded)

Thermal insulation

Icopal insulation adhesive

Siplast vapour control layer

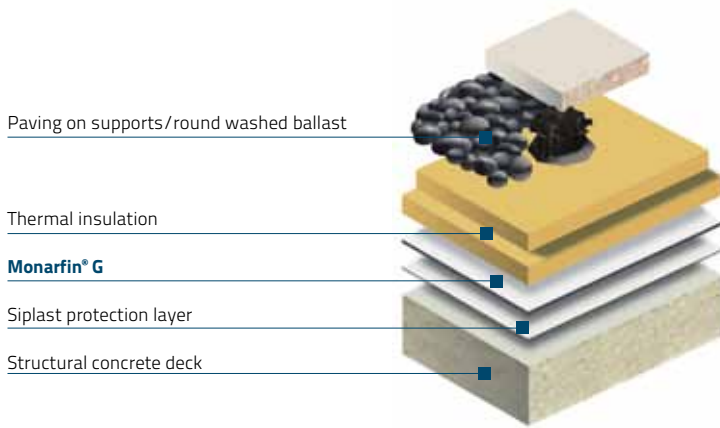
Structural deck



## **Adhered System**

Fully or partly adhered systems are more commonly used above concrete substrates where the process of installing mechanical fixings is invasive and labour intensive. Adhered systems are reliant upon suitable weather conditions (which should be considered) however, complex geometries and pitched surfaces can be accommodated with great success. Adhered membranes can also provide a superior surface finish.



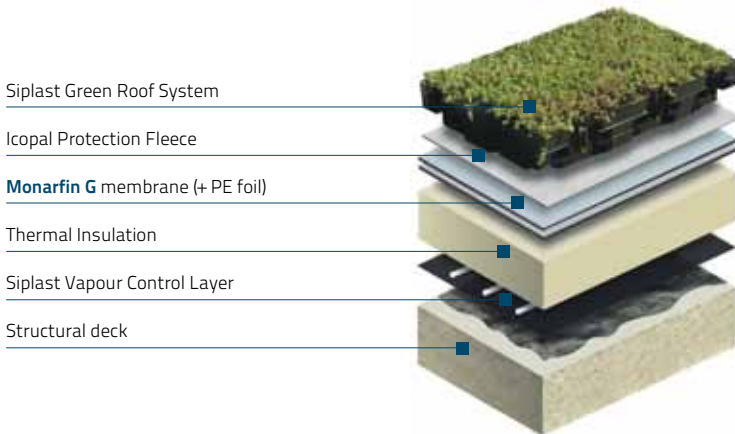
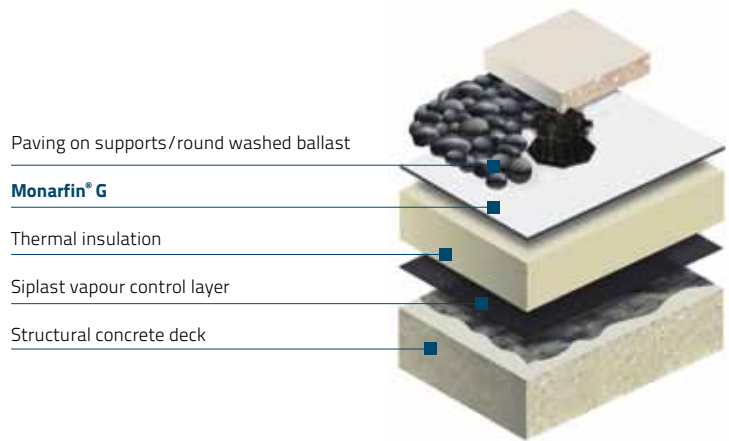


### Inverted Roof System

Inverted roof systems offer an excellent solution for situations where access or recreation are a priority. Ballasted systems also provide maximum resistance against membrane damage, UV degradation, thermal shock, fire or noise. Standard Monarfin membranes can be used in buried systems and do not require substitution for alternative grades.

### Warm Ballasted Roof System

The Monarfin membrane is loose-laid and welded together at the overlaps prior to the application of the ballast which holds the membrane in place. This method offers maximum restraint to wind uplift and fast application times, while providing protection from mechanical and solar/UV damage.



### Green Roof System

The use of an Icopal Green Roof system adds another dimension to a Monarfin roof system. In ballasted or inverted build ups the green roof will act as the ballast to secure the system. Additional ballast may be required around perimeters depending on wind loadings.

# Certification

Our synthetic membranes comply with the international standards. If needed, we can provide you with an adequate certificate (BBA, DoP, EN or ASTM standard).

# The presence of Monarfin® throughout the world



**Germany**, Osnabrück



**England**, Cottingham



**The Netherlands**, Groningen





**Spain**, Zaragoza, Aceros IMS plant



**Spain** Madrid, sport center





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