

# Monarplan®

## Reliable PVC Waterproofing Systems





**Lightweight**  
**Reliable**  
**Versatile**  
**Economical**  
**Distinctive**

# Monarplan® PVC waterproofing systems with proven **track record**

**PVC membranes from the Icopal Group have been in use for over 50 years, covering roofs of all types and forms. Monarplan is a flexible and lightweight waterproofing solution providing long-term performance.**

Monarplan is a range of flexible PVC (polyvinyl chloride) single ply membranes providing excellent strength, elongation and weathering characteristics, hence making it ideal for new construction, remodelling or refurbishing projects.

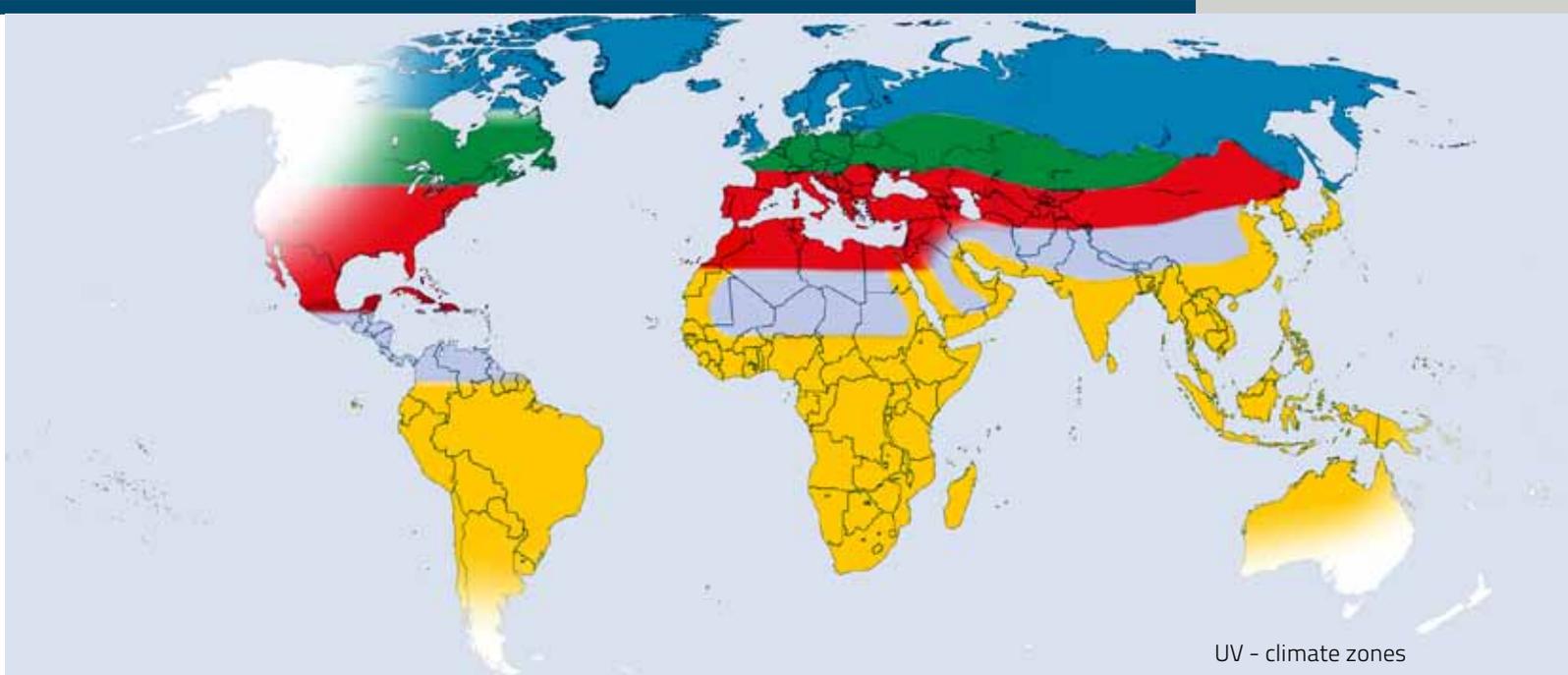
#### **Diversity**

Monarplan membranes have been successfully installed on many commercial and domestic projects including some of

the following building types::

- Schools / Universities
- Hospitals
- Private residences
- Factories & Warehouses
- Offices
- Supermarkets
- Retail developments





# Overview World

## UV-climate zones

**Depending on location, the UV conditions may affect the exposed synthetic waterproofing differently. Strong UV radiation can be harmful to PVC synthetic membrane; therefore we thoroughly analyse and advise on the appropriate choice of product for specific projects.**

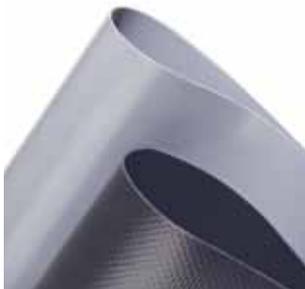
There is no one common solution for all locations. That is why we offer specific features and product composition to answer all needs and to guarantee the long life of the waterproofing system.

In Siplast-Icopal, our commercial and technical team can provide you with support and advice on choosing the appropriate solution according to type of building, its location, and installation techniques.



# Monarplan Membranes

Monarplan is a flexible PVC-P single ply membrane providing excellent strength, elongation and weathering characteristics, hence making it ideal for new build or refurbishment projects. Membranes are reinforced and are available with or without a fleece backing providing scope for all methods of application and offering specifiers confidence in performance and unlimited freedom in design.



## Monarplan FM

Monarplan FM is a polyester reinforced membrane designed specifically for use within mechanically fixed applications. The polyester fabric gives the membrane inherent tensile strength which is required to facilitate 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 / 1.8mm / 2.0mm  
Width: 1.06m / 1.65m / 2.12m  
Roll lengths: 15m (for 1.5mm, 1.8mm, 2.0mm thickness)  
20m (for 1.2mm thickness)



## Monarplan G

Monarplan G incorporates a glass reinforcement encapsulated between two layers of extruded PVC. The membrane specifically designed for use within ballasted or green roof constructions where the membrane is buried. Monarplan 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



## Monarplan GF

Monarplan GF is glass stabilized PVC 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



## Monarplan FM G

Monarplan FM G is glassfleece/glass scrim reinforced membrane, designed specifically for use in loose laid ballasted applications. This membrane is recommended in areas with high UV indices, extreme temperatures and low and/or high humidity.

Thickness: 1.5mm  
Width: 2.08m  
Roll length: 15m



# Monarplan Accessories

For the most recent portfolio information, please contact us.

## Monarplan 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.



## Monarplan D Unreinforced Flashing

The Monarplan 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: 0,75 / 1,4 / 1,5 m x 15 m.



## Monarplan PVC W Walkway Membrane Anthracite

Monarplan Walkway Membrane is a weather resistant anthracite PVC membrane which incorporates an embossed, non-slip, interlocking herringbone tread pattern.

Thickness: 1.5mm. Dimensions: 1,06 m x 15 m.



## Monarplan PVC LIQUIDE

PVC liquid paste mixed with THF for finishing of weldings.

Can: 1.25 L



## Monarplan COLLE CONTACT TEROSON AD 914

Strong solvent based contact adhesive that allows the bonding of Monarplan® non-fleeceback 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: 10 KG

## Monarplan PVC coated metal sheet

Hot dipped galvanised steel sheet of 0.6 mm coated with a layer of 0.6 mm nonreinforced PVC 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

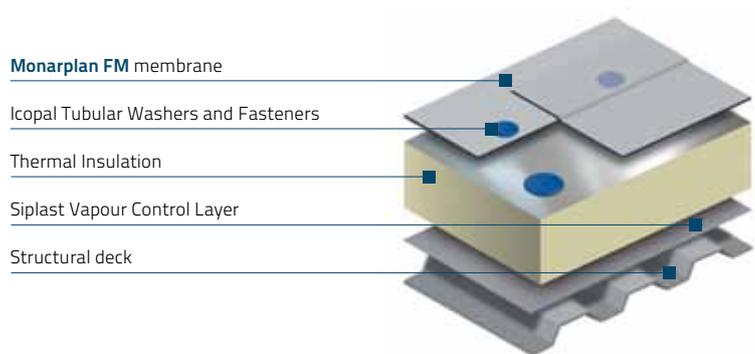


# Methods of Application

With today's construction trends towards highly intricate and complex structures, and the requirement for higher thermal insulation values, only membranes which aspire to the highest quality standards possessing unquestionable technical properties will be considered during the design process. Monarplan's versatility ensures the designer complete freedom and security when specifying the roof waterproofing system.

## Mechanically Fastened System

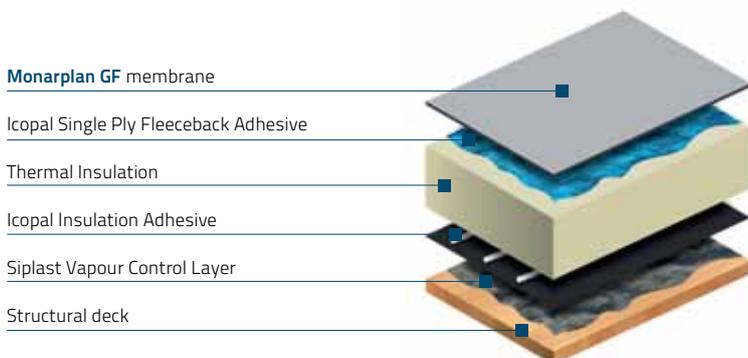
Mechanically fixed systems are often favoured above timber or metal decks where the exposure of the fastener on the underside of the structure is not a consideration. This method of application involves the use of fasteners fixed at pre-determined centres and is a fast and cost-effective method of installing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



## Partly or Fully Adhered System

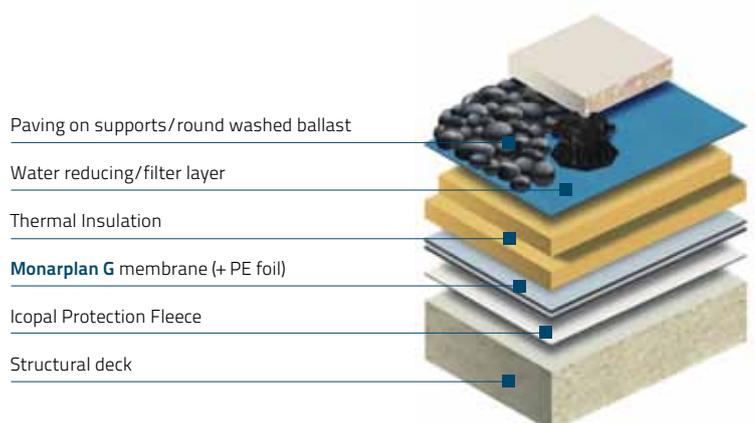
### Partly or Fully Adhered System

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 Ballasted 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.





### Warm Ballasted Roof System

The Monarplan G 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.

Paving on supports/round washed ballast

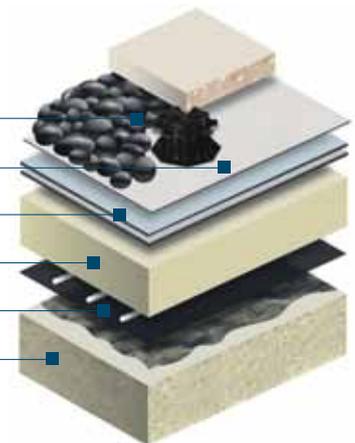
Icopal Protection Fleece

**Monarplan FM G** membrane (+ PE foil)

Thermal Insulation

Siplast Vapour Control Layer

Structural deck



Icopal Green Roof System

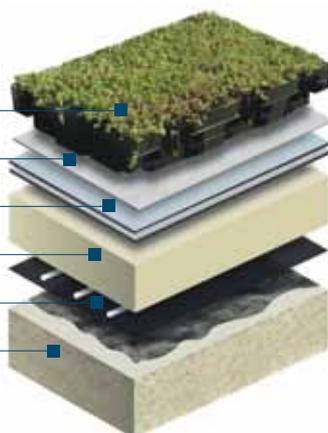
Icopal Protection Fleece

**Monarplan G** membrane (+ PE foil)

Thermal Insulation

Siplast Vapour Control Layer

Structural deck



### Green Roof System

The use of an Icopal Green Roof system adds another dimension to a Monarplan 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.

# Features and Benefits

## Performance

With over 50 years of history with synthetic products, Icopal has the knowledge and experience required to produce membranes of the highest quality offering exceptional long life cycle performance, reducing the impacts associated with environmental landfill and whole life cost expenditure.

## Aesthetic

Monarplan PVC is available in grey, white and anthracite colours as standard, enabling the roof to blend seamlessly into a built-up area, or to match other construction materials. The range also brings significant design freedom, giving architects the opportunity to create highly distinctive buildings or to sympathetically renovate existing roofs. The pigments used to colour the upper layer of the Monarplan membrane guarantee colour fastness, UV protection, and resistance to ageing. Other colours are available by special order.

If you want the colours to last even longer, then there are also the Monarplan LA (lacquered) membranes. With this lacquered feature the lifetime of the roof will be extended. The lasting colours will bring added value to the building. Aside from the lacquered membranes, there are also special embossed membranes available.

Together with Monarplan's special accessories, the Monarplan membranes give a distinctive appearance to your building.

## Environmental Responsibility

As manufacturer, the Icopal Group is committed to the integration of environmentally considerate activities across all aspects of the business. As such, all Icopal manufacturing sites adopt environmental practices and procedures and many manage and control their performance through the ISO 14001 environmental management system.

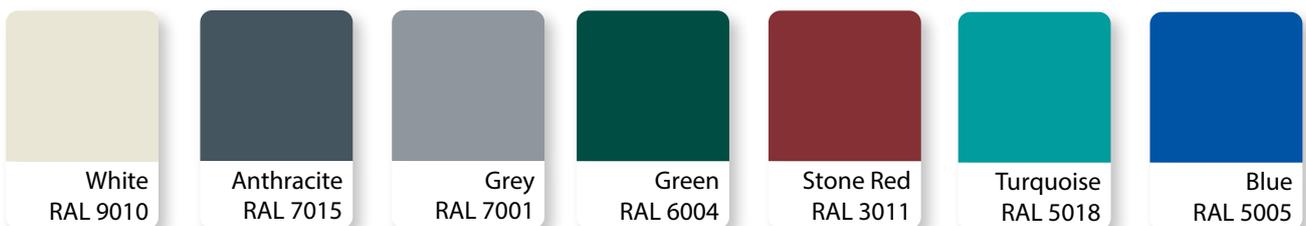
One of the main environmental benefits associated with PVC is its versatility and ability to re-use waste matter generated during the production process. Waste from membrane cutting, colour changes etc. can be recycled into re-usable material and returned to the manufacturing process, where it can be used to create further membrane or other PVC products. Icopal is a member of RoofCollect, the European solution for collecting and recycling PVC roofing materials.

## Guarantee

As a world leader in the manufacture of waterproofing membranes, we pride ourselves on providing the most comprehensive guarantees available in the flat roof waterproofing industry.

## Secure Welding

Monarplan is a thermoplastic membrane. As a result, overlapping sheets can be welded together to form a homogeneous lap using hot air equipment (eg. manual hot air welders or automatic equipment).



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



## Special features – enhancing the durability

The following special features are available as an alternative to the exposed solution (Monarplan FM):

- **Monarplan LL.** LL stands for longer lasting. This membrane has even better UV resistance, so it has an enhanced lifetime in regions with high UV radiation.
- **Monarplan LA.** LA stands for lacquering. This membrane has an extra lacquer layer which gives a longer durability to the exposed membrane. Resistance against soiling, easy to clean and anti-ageing.

- **Cool Roof effect.** The third special recommendation to have a longer lasting exposed membrane is to choose a clear colour. White is most appropriate as it helps to reflect the UV radiation, to keep the roof surface cooler and also to create a Cool Roof effect, saving energy for the building.

## Collect and recycle

Icopal Group actively supports the Pan-European ROOFCOLLECT® program to collect and recycle PVC roofing membranes. The aim of ROOFCOLLECT®, a program set-up by the leading manufacturers of plastic roofing and underlays, is the cost-effective and environmentally compatible collection and recycling of PVC roofing underlays.



**ROOFCOLLECT®**  
Recycling System for Thermoplastic Membranes

## Certification

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

# Our **Monarplan PVC membranes** around the world



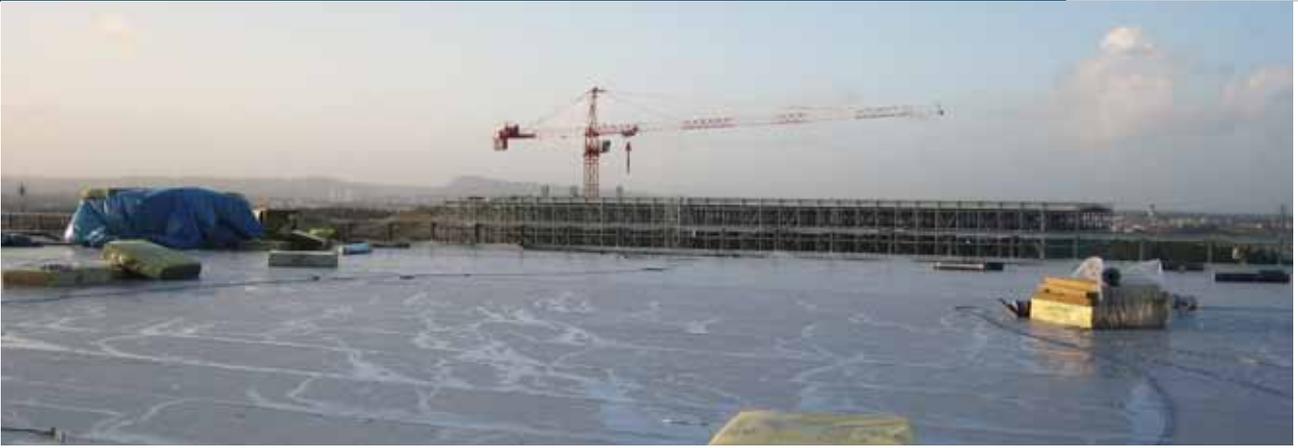
**Morocco**, Tanger, Renault production plant, 230 000 m<sup>2</sup>



**France**, Rochefort, industrial building, 10 000 m<sup>2</sup>



**Andorra**, Sant Julià de Lòria, mall 3 500 m<sup>2</sup>



**Portugal**, Setubal, Portucel plant, 11.000 m<sup>2</sup>



**France**, Thillois, mall, 45 000 m<sup>2</sup>



**United Kingdom**, Liverpool, industrial building, 4700 m<sup>2</sup>



**Poland**, Komorniki, warehouse, 24 000 m<sup>2</sup>

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