

COSMOFIN PVC

Single Ply Waterproofing Systems



Cosmofin PVC Single Ply Waterproofing from Wolfin

PVC membranes from Wolfin have been in use for over 50 years, covering roofs of all types and form. Whether it's domestic or commercial, public or private; Cosmofin PVC membranes offer a flexible and lightweight waterproofing solution with a proven track record.

Cosmofin is a flexible PVC (polyvinyl chloride) single ply membrane offering excellent characteristics of strength, elongation and weathering, making it ideal for new build or refurbishment projects.

All Cosmofin membranes are reinforced and are available with or without a fleece backing providing scope for all methods of application, such as mechanically fastened, adhered or loose laid and ballasted.



Diversity

Cosmofin PVC membranes have been successfully installed on a range of commercial and domestic projects including some of the following building types:

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

Reliability

Clients and private customers can be reassured by the range of insurance backed guarantees and third party accreditations offered with Cosmofin PVC membranes.

- Guarantees options for 10, 15 & 20 years
- BBA and ETA Certified product
- Sustainability A+ BREEAM Rating*

Cosmofin Membranes

Cosmofin is a flexible PVC-P single ply membrane offering excellent characteristics of strength, elongation and weathering 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.

Cosmofin GF Fleeceback

Cosmofin GF Fleeceback is glass reinforced PVC membrane incorporating a polyester fleece backing. The factory laminated polyester backing allows the membrane to be partially or fully 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.

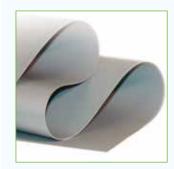
Thickness: 1.5mm + fleece Roll Size: 2.12 x 15m



Cosmofin G

Cosmofin G incorporates a glass reinforcement encapsulated between two layers of extruded PVC. The membrane is manufactured with a fungicidal additive and is specifically designed for use within ballasted or green roof constructions where the membrane is buried. Cosmofin G is resistant to micro organism attack and can provide a long lasting waterproof solution for roof areas that need to be waterproofed fast.

Thickness: 1.5mm Roll Size: 2.12 x 15m



Cosmofin FM

Cosmofin FM is a polyester reinforced membrane designed specifically for use within mechanically fixed applications and as a detailing membrane for up stands. The non-wick 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 Roll Sizes: 1.5 x 20m (1.2mm only)

 $1.5 \times 15 m$















Features and Benefits

Performance

With over 50 years of history with synthetic products, Wolfin have 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.

Aesthetics

Cosmofin PVC is available in light grey (RAL7001) and anthracite (RAL7015) 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 Cosmofin membrane guarantee colour fastness, UV protection, and resistance to ageing. Other colours are available to special order.

Environmental Responsibility

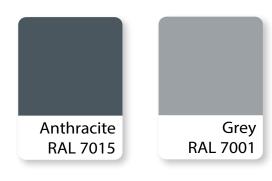
As manufacturers, Wolfin are committed to the integration of environmentally considerate activities across all aspects of business. As such, all Wolfin manufacturing sites adopt environmental practices and procedures and many manage and control their performance through the ISO 14001 environmental management system. One of the main environmental benefits associated with PVC is its versatility and ability to re-use waste material 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.

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 Single Ply Waterproofing industry. Wolfin guarantees are underwritten by a range of insurance policies covering design, product failure and consequential damage for periods of 10, 15 and 20 years. Wolfin's Product Guarantee insurance is arranged with first class security on the London Insurance Market.

Secure Welding

Cosmofin PVC 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).





Product Support

Whether it is new build or refurbishment, Wolfin's Technical department will ensure all aspects of the proposed roofing scheme comply with all the latest Building Regulations and codes of practice.

Product Support

Complying with the latest building regulations and codes of practice, Wolfin's technical department ensures that the critical issues and design requirements are identified and resolved in the early stages of the project, removing unwanted waste from the decision process and reducing on site cost and improving build efficiency.

Specifications

Should it be requested, bespoke system specifications can be provided. Specifications are created in NBS J42. Each specification will include such things as project specific drawings and make reference to current regulations and standards, ensuring compliance at all times.

Calculations & Designs

Wolfin's Technical Department can provide the following range of services:

- U-Value calculations Condensation risk assessments
- Standard and bespoke Tapered insulation designs technical drawings Acoustics
- Wind uplift

Approved Contractors

Wolfin recommend the use of trained and approved installers for all their waterproofing systems as a trained operative is required to demonstrate professional levels of competency in all aspects of membrane detailing and application. To receive the current list of Cosmofin PVC trained contractors or to become a Cosmofin trained contractor, please contact Wolfin's Technical Department on 0161 866 6552 or send an email to technical@wolfin.co.uk.

Repair and Maintenance

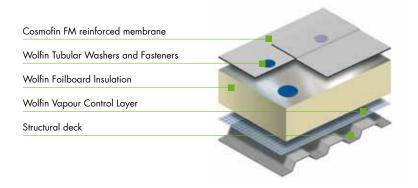
All roof waterproofing systems require periodical inspection and maintenance. BS 6229: 2003 recommends that all flat roofs be inspected twice yearly; (eg. autumn and spring) so that potentially blocked gutters or outlets can be cleared. In areas of high dust or pollution, inspections should be carried out more frequently.

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 Cosmofin PVC ensures the designer total freedom and security when specifying the roof waterproofing system.

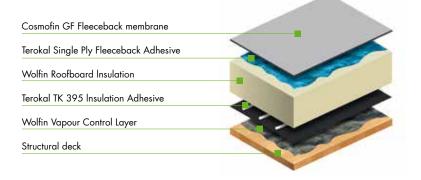
Mechanically Fastened System

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.



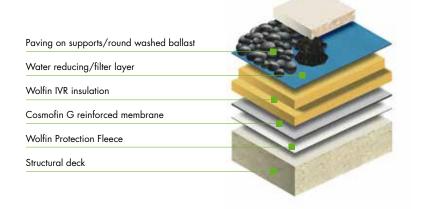
Partially or Fully Adhered System

Fully/partially adhered systems are more commonly used above concrete substrates where the process of installing mechanical fixings is invasive and labour intensive. Fully/partially adhered systems are reliant upon suitable weather conditions (which should be considered). However, complex geometries and pitched surfaces can be accommodated with great success. Fully/partially 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 Cosmofin 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	
Wolfin Protection Fleece	
Cosmofin G reinforced membrane	
Wolfin Roofboard Insulation	
Wolfin Vapour Control Layer	3
Structural deck	

Green Roof System

The use of a Wolfin Green Roof system adds another dimension to a Cosmofin PVC 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.

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Wolfin Green Roof System	The same of the sa
Wolfin Protection Fleece	
Cosmofin G reinforced membrane	
Wolfin Roofboard Insulation	
Wolfin Vapour Control Layer	
Structural deck	

Guarantees

As a world leader in the manufacture of single ply membranes, we pride ourselves on offering the most comprehensive guarantees available in the flat roof industry, giving further reassurance of our commitment in providing total confidence in our range of high performance waterproofing membranes.

Wolfin guarantees incorporate a range of features and benefits tailored to suit the client's specific requirements, including materials, insurance backing, design, consequential damage and approved installation. All guarantees offer up to 20 years as standard, subject to specification.

Several different levels of guarantee coverage are available as per the following list.

- Insurance Backed System Guarantee
- Insurance Backed Product and Workmanship Guarantee
- Insurance Backed Product Guarantee

For further information on different guarantee options, please refer to the Wolfin Insurance Backed Guarantees Brochure or contact Wolfin's technical department.



Wolfin offers a single source solution for complete roof waterproofing. This means simplifying the specification process whilst ensuring that all aspects of an installation attain the same excellent quality through stringent project monitoring and a guaranteed support mechanism.

Vapour Control Layer

Wolfin supplies a range of high performance polyethylene and bituminous vapour control layers for use with its single ply roofing systems.

Wolfin's **Witek SK** vapour barrier membrane is made of a special aluminium-polyester composite foil and a cold-bonding self adhesive layer based upon bitumen rubber. Equipped with a self-adhesive sealing edge and a special surface so that insulation materials can be bonded on top using PU adhesives.

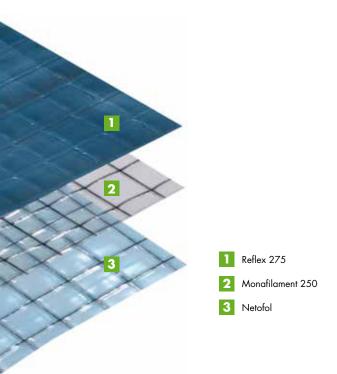
These membranes are suitable for direct use on metal, timber and concrete deck types.

For mechanically fastened situations, the Monarflex range of reinforced polyethylene VCL's, which includes **Reflex 275**, **Monofilament 250**, and **Netofol**, provide a quick and cost effective method of vapour control.

These membranes are loose-laid with laps sealed with Monobond LT tape, and are secured to the roof deck through the mechanical fastening of the insulation board.

Monarflex multi-layer VCL's are manufactured from virgin polyethylene with built-in reinforcement grids of HDPE making them highly resistant to tears and damage. Some also have a layer of aluminium foil for higher water vapour resistance performance.

For further guidance and product information contact Wolfin Technical department on 0161 866 6552 or by sending an e-mail to technical@wolfin.co.uk.



Thermal Insulation

The Wolfin range of insulation boards has been specifically designed to complement Wolfin's single ply roofing systems. These boards are available as a uniform flat board, or can be supplied as a tapered board to offer a cost effective solution to providing positive falls, even on the most complicated of projects.

Wolfin rigid PIR thermal insulation boards are CFC/HCFC free, have a zero Ozone Depletion Potential (ODP), and have a Global Warming Potential (GWP) of less than 5. They have excellent thermal performance, dimensional stability and are resistant to mould and microbial growth.



Wolfin Foilboard is a rigid PIR insulation board and is faced on both sides with a low emissivity composite foil autohesively bonded to the insulation core during manufacture. Wolfin Foilboard is suitable when the board and waterproofing are being mechanically fastened to the structural deck using screws and washer plates.

Wolfin Roofboard is a rigid PIR insulation board and is faced on both sides with a mineralised glass tissue autohesively bonded to the insulation core during manufacture. Wolfin Roofboard is suitable for use when the board is being adhered to a suitably bonded vapour control layer. It is also suitable when the waterproofing is being adhered to the insulation board. This insulation board may also be used in a mechanically fastened situation.

Wolfin IVR insulation board is for use in inverted roof situations. It is an expanded polystyrene (EPS) board made from a low water absorption polystyrene bead. Wolfin Hydroshield is to be used in conjunction with the Monarperm water reducing layer. Water seeping between the insulation board causes a cooling affect which must be accounted for within thermal calculations. The use of the Monarperm water reducing layer minimises water seepage, allowing better U-value performance for a given thickness of insulant.

Mechanical Fasteners

Wolfin supply a range of specialist fasteners for securing thermal insulation and Cosmofin PVC membranes to a variety of structural roof decks including steel, concrete and timber.

Wolfin Tubular Washers eliminate all thermal transmittance associated with metal fasteners, thereby allowing reduced thicknesses of insulation. They are designed with a low-profile washer and narrow tube diameter which aids installation and improves aesthetics.



Wolfin Screw Fasteners are manufactured from high grade carbon steel which are case hardened to achieve the properties essential for long term performance and have an organic corrosion resistant finish to meet UEAtc Part 2 requirements.

Thermal insulation boards should be independently mechanically fastened to the structural deck. The number of fixings and the application pattern is dependent upon the size and type of insulation board.

Wind Loadings

Wind loadings should be assessed in accordance with BS 6399–2: 1997 (Loadings for buildings. Code of practice for wind loads) or BS EN 1991-1-4 taking into account the height, width and length of a building, its orientation and its geographical location.

Accessories

Cosmofin PVC accessories have been individually designed to ensure total compatibility and ease of application and play a vital role in achieving the total integrity of the Cosmofin PVC waterproofing system. Amongst others, accessories include Cosmofin Coated Metal sheet for the prefabrication of edge trims and details, a range of Cosmofin Outlets, Cosmofin Walkway Membrane, and an extruded PVC profile for the simulation of traditional metal and standing seam roofs finishes.

Cosmofin Product Range

The Cosmofin 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. Membranes and accessories are available in light grey and anthracite as standard. Technical data sheets are available upon request.

Cosmofin PVC Waterproofing Membranes

Product	Thickness	Roll Size	Colour
Cosmofin GF Fleeceback	1.5mm + fleece	2.12 x 15m	Light Grey & Anthracite
Cosmofin G	1.5mm	2.12 x 15m	Light Grey & Anthracite
Cosmofin FM 1.2	1.2mm	1.5 x 20m	Light Grey & Anthracite
Cosmofin FM 1.5	1.5mm	1.5 x 15m	Light Grey & Anthracite
Cosmofin FM 1.8	1.8mm	1.5 x 15m	Light Grey & Anthracite

Cosmofin PVC Ancillaries

Product	Thickness	Size	Colour
Membrane Accessories			
Cosmofin Reinforced Strip	1.5mm	0.15 x 15m	Light Grey & Anthracite
Cosmofin D Unreinforced Flashing	1.5mm	1.4 x 15m	Light Grey & Anthracite
Cosmofin W Walkway Membrane	2.0mm	1.06 x 15m	Anthracite
Outlets			
Cosmofin Outlets	-	50/70/80/100/125/150mm Ø	Light Grey
Cosmofin Refurbishment Outlets	-	50/70/80/100/125/150mm Ø	Light Grey
Cosmofin Universal Leaf Grate	-	-	Black
Cosmofin Parapet Outlet	-	70/100/150mm Ø	Light Grey
Cosmofin Parapet Leaf Grate	-	-	-
Pipe Boots/Vents/Tube Ducts			
Cosmofin Multiple Cable Duct	-	100mm Ø	Light Grey
Cosmofin Single Cable Duct	-	24mm Ø	Light Grey
Cosmofin Pipe Flashing	-	75 – 125mm Ø	Light Grey & Anthracite

Pre-fabricated Corners			
Cosmofin Internal Corners	-	-	Light Grey & Anthracite
Cosmofin External Corners	-	-	Light Grey & Anthracite
Coated Metal/Standing Seam/Lightning Cond	luctor Clips		
Cosmofin Coated Metal	1.2mm	1 x 2m	Light Grey & Anthracite
Cosmofin Standing Seam	25mm	3mm	Light Grey & Anthracite
Cosmofin Lightning Conductor Clips	-	3mm & 5mm	Light Grey
Adhesives			
Cosmofin Contact Adhesive	-	10kg	Translucent
Terokal TK400 Adhesive	-	750 ml canister	Light Green
Wolfin Single Ply Fleeceback Adhesive	-	20kg	Blue
Terokal TK 395 insulation adhesive	-	750 ml canister	Light Beige
Terokal Spray Applied Contact Adhesive	-	750 ml canister	White String Like
Terokal PU Cleaner	-	500ml canister	Clear

Wolfin Tube Washers/Pressure Plates/Fixing Bars/Fasteners

Product	Size		
Tube Washers			
Wolfin Membrane Tube Washer (45mm Ø)	40/60/80/90/100/120/150/ 180/210mm		
Wolfin Insulation Tube Washer (75mm Ø)	40/60/80/90/100/120/150/ 180/210mm		
Pressure Plates			
Wolfin Flat Steel Pressure Plates (timber substrate)	82 x 40mm		
Wolfin Deep Dish Pressure Plates (mineral wool substrate)	82 x 40mm		
Fixing Bars			
Wolfin Galvanised Fixing Bar (Peel Stops)	3m x 25mm		
Wolfin Termination Bar	3m x 25mm		
Fasteners			
Wolfin 5.8mm Carbon Steel Fasteners (into timber & metal decks)	40/55/65/75/85/95/105/115/ 125/150/175/200mm		
Wolfin 4.8mm Stainless Steel Fasteners (into metal decks)	60/80/100/120/140mm		
Wolfin HD 6.1mm Carbon Steel Fasteners (into concrete)	32/50/75/85/100/125/150/ 175/200mm		

Insulation

Product	Thickness	Size	Application
PIR Insulation			
Wolfin Foilboard (PIR)	30/35/40/50/60/70/80/ 90/100/110/120mm	1200 x 2400mm	Mechanically Fixed
Wolfin Roofboard (PIR)	25/30/40/50/60/70/80/ 90/100/110/120mm	1200 x 2400mm	Mechanically Fixed & Fully Adhered
EPS Insulation			
Wolfin IVR*	120/150/160/170/180/ 205/220/240/260/320mm	1200 x 590mm	Inverted Roofs

 $^{{}^\}star \text{Wolfin IVR}$ to be used in conjunction with Cosmofin water reducing layer.

Vapour Control Layer

Product	Thickness	Size	Application
Reinforced Polyethylene			
Netofol	0.2mm	2 x 50m	Loose-laid & Mechanically Fixed
Monofilament 250	0.25mm	2 x 50m	Loose-laid & Mechanically Fixed
Reflex 275	0.3mm	2 x 25m	Loose-laid & Mechanically Fixed
Reinforced Bitumen Membranes			
Witek SK	1.5mm	1 x 15m	Heat-activated/Self Adhesive

System Ancillaries

Cosmofin ancillaries have been individually designed to ensure total compatibility and ease of application and play a vital role in achieving the total integrity of the overall Cosmofin waterproofing system. All membranes and ancillaries are available in light grey and anthracite as standard. Separate technical data sheets on all products are available upon request.

Cosmofin Coated Metal

Cosmofin Coated Metal is a 0.6mm hot dipped galvanised steel sheet coated with a layer of 0.6mm non-reinforced PVC film for an overall thickness of 1.2mm. The sheet is cut into appropriate widths and used to fabricate metal drip edges or other roof perimeter edging profiles. The coated metal can also be used to provide mechanical restraint at any changes in level, abutments or roof area perimeters.



Cosmofin Reinforced Strip

Cosmofin Reinforced Strip is used to achieve a watertight detail where end laps of the Cosmofin PVC GF Fleeceback membrane are butt jointed. It is also used in conjunction with coated metal drips and upstands.



Cosmofin D Unreinforced Flashing

The Cosmofin D unreinforced flashing is intended 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.



Cosmofin W Walkway Membrane

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



Cosmofin 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.



Cosmofin Pipe Flashing

Cosmofin Pipe Flashing are moulded preformed PVC pipe flashings designed to suit a range of pipe diameters, achieving a watertight seal.



Cosmofin Standing Seam Profiles

Cosmofin Standing Seam Profiles provide the specifier a cost effective way to replicate the aesthetic appearance of traditional metal standing seam roofs.



Cosmofin Outlets

Cosmofin Outlets are manufactured from rigid PVC incorporating a Cosmofin flange for easy welding to the roof membrane. Connection is made with the plumbing using a rubber gasket. Supplied in both standard and parapet form, the Cosmofin Outlet range is completed with leaf guards where required.



Cosmofin Universal Leaf Grate

Cosmofin Universal Leaf Grate is a rigid plastic leaf grate with screw adjustable expanding clamps. It is suitable for use with the range of Cosmofin Outlets and Cosmofin Refurbishment Outlets.



Cosmofin Lightning Conductor Pads

Cosmofin Lightning Conductor Pads comprise a lightning conductor cable clip mechanically attached to a circular PVC membrane disc which is then welded to the main Cosmofin PVC roof membrane. The clips are available to suit either a bare copper, or a PVC-coated, conductor strip. Standard membrane colour available is light grey.



Cosmofin Cable & Tube Ducts

Cosmofin Multiple Cable Duct consist of a PVC pipe providing a rigid upstand, capped with two PVC pipe elbows. The integral PVC membrane flange can be welded to the underlying membrane to maintain the waterproofing detail.



Cosmofin Single Cable Duct consist of a continuous 24mm diameter PVC pipe providing a rigid upstand to accommodate thin cables. The integral PVC membrane flange can be welded to the underlying membrane to maintain the waterproofing detail.



Wolfin Galvanised Fixing Bar (peel stop)

Wolfin Galvanised Fixing Bar is a 3m galvanised steel bar with pre-drilled holes at specified centres to facilitate the mechanical restraint of Cosmofin membranes at the base of upstands or angle changes. It should be fastened to the more stable substrate, ie fixed vertically to the structural deck or horizontally to masonry or concrete upstands.



Wolfin Termination Bar

Wolfin Termination Bar is designed for securing and sealing membrane terminations at upstands in accordance with current Wolfin specifications. The 3m long bar incorporates pre-drilled holes at 150mm centres.



Wolfin Screw Fasteners, Tubular Washers & Pressure Plates

Wolfin Screw Fasteners are manufactured from high grade carbon steel which are case hardened to achieve the properties essential for long term performance and have an organic corrosion resistant finish to meet UEAtc Part 2 requirements. The fasteners are also available in austenitic stainless steel offering exceptional corrosion resistance for extended warranty projects.



Wolfin Tubular Washers are precision moulded from high grade polypropylene and extensively tested to ensure resistance to the extreme temperatures and mechanical stresses encountered within the roofing system. They are blue in colour and are available with two washer diameters: A 45mm diameter for fixing membranes and a 75mm diameter for fixing rigid insulation boards.

Wolfin Pressure Plates are manufactured from high quality corrosion-resistant stainless steel. Wolfin Pressure Plates are for use where tube washers cannot be utilised or where the membrane is being fastened when insulation is not present, eg cold roof situations.

Complimentary Products

Wolfin's approach to providing a fully guaranteed and integrated waterproofing solution is to include a range of specifically designed complimentary products eliminating the need for split responsibility or unknown quality.

Wolflite Rooflights and Hatches

It is now accepted that natural light in buildings helps create better quality environments for people, improving their concentration and general feeling of well-being, leading to better productivity.

Specifying and installing a Wolflite Rooflight helps ensure optimum and uniform natural light in rooms, guaranteeing both health and economic benefits.



Roofgard Paving Support System provides a versatile and cost effective means of creating a fully supported and stable raised paved area, terrace, walkway or balcony. They are suitable for use with concrete paving tiles, or Wolfin Terradek timber decking tile.

Wolfin Roof Plant and Equipment Support

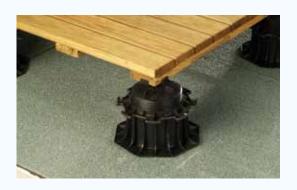
Provides a cost effective way of supporting rooftop equipment and services without penetrating the waterproofing. The system is lightweight and adaptable avoiding unnecessary costly detailing.

Wolfin Roof Safety Systems

Wolfin provides a range a Roof Safety Systems including guard rail and fall restraint systems.

There is a duty of care placed upon employers outlined in the Working at Height Regulations 2005 to provide safe methods of access and protection for personnel accessing roofs. Wolfin can advise and design fall protection and roof safety systems with guaranteed waterproofing as part of the overall roof specification.











A part of the Icopal group



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