



guaranteed roofing solutions



Introduction to Radmat

Radmat is an independent British company specialising in the manufacture and supply of high performance flat roof waterproofing systems and components, including Green/Living Roofs.

Supplying only through Radmat Approved Contractors we provide comprehensive design and technical support to the entire construction team, aiding delivery of the right solution at the right price.



Our long standing relationships with some of the UK's leading clients, architects, surveyors, main contractors and specialist roofing & waterproofing contractors bear testimony to our levels of commitment to doing the job right first time, an attitude that has benefitted many prestigious projects across the United Kingdom.

Whether new construction or refurbishment our focus is on providing the most suitable waterproofing solution for the application, taking into consideration requirements such as design, current regulations, aesthetics, thermal performance, drainage requirements, wind uplift resistance, safety, programme, budget, build ability and ultimate client use.

We believe so strongly in the quality of our products and services that we provide long duration guarantees that covers materials, design, workmanship and consequential loss; providing total peace of mind.

For comprehensive support for your roofing projects contact Radmat Building Products:
Tel: 01858 410372
e-mail: techenquiries@radmat.com
www.radmat.com

The Radmat product range:

➤ PermaQuik PQ6100, hot melt monolithic waterproofing	page 4
➤ EshaFlex & EshaGum, reinforced bitumen membranes	page 5
➤ EshaPlan, single ply membranes	page 6
➤ EshaUniversal, single layer membranes	page 7
➤ ParaFlex, cold resin waterproofing	page 8
➤ Ancillary components	page 9
➤ MedO, sedum, wildflower and biodiverse green roofing systems	page 10
➤ TredWay, easy-lay modular paving systems	page 11

Radmat Total Care

*liquid applied
insulation
green roof
single layer
reinforced bitumen*

*single ply
hot melt
brown roof
roofing systems
biodiverse roof*

Supporting all our products is Radmat Total Care, a complete roofing solutions service designed to take away many of the traditional roofing headaches by coordinating design, specification, tendering and delivery. Radmat Total Care has only one aim, to provide quality where it counts: Quality in Service, Products, Systems, Design and Workmanship.

Treating every project as a collaborative effort, Radmat Total Care delivers the ultimate roofing solution, whether new build or refurbishment. Establishing the project's objectives from the outset enables the Radmat Technical Adviser to match the right Radmat roofing systems to the brief, and helps ensure compliance with current Building Regulations.

Once the needs of the project are agreed the Technical Adviser can proceed towards producing a detailed specification for the roof works, working in close cooperation with the specifier on design and detailing. If the project is a refurbishment, a full roof survey will be conducted, including a thermographic or moisture mapping survey where appropriate. When the specification and survey are completed they will be sent to the specifier with a list of Radmat Approved Contractors most appropriate for tender of the works.

When the project is on site a Radmat Technical Adviser will work with the successful Approved Contractor, liaising regularly, helping solve technical issues as they arise and conducting pre-agreed site inspections to monitor the quality of workmanship. Following satisfactory completion of the project a final inspection will be undertaken, ensuring the work has been completed in accordance with the specification and that it meets the necessary standards for guarantee.

Radmat Services include:

- CPD seminars
- Design & Specification support
- NBS and Bespoke Specifications
- CAD Details
- Roof Surveys
- Condition reports & remedial proposals
- In progress inspections
- Guarantee inspections
- Comprehensive guarantees



PermaQuik PQ6100

PermaQuik PQ6100 is a Hot Melt monolithic membrane roofing system suitable for inverted roof, basement and podium waterproofing applications.

Applied in two layers that encapsulate the PQ2017 polyester reinforcing fleece, PermaQuik PQ6100 combines excellent waterproofing performance with toughness, durability, flexibility and strong adhesion to a variety of substrates.

Hot Melt Monolithic Membrane



Library of Birmingham



Novotel, Greenwich

Developed in Canada in the 1960's, PermaQuik PQ6100 is manufactured in the UK following extensive research and development with Shell UK in our ISO14001 production facility. Its unique blend of bitumen, natural rubbers and polymers create a membrane that has self-healing properties, can be installed to zero falls in accordance with BBA Information Bulletin No 4 and has a BBA Certified durability for *'the design life of the roof in which it is incorporated'*.

Installed to achieve a minimum thickness of 6mm, PermaQuik PQ6100 is finished with either a standard or root prevention wearing sheet prior to being electronically tested. In Inverted roof applications Radmat ProTherm Inverted Roof Insulation board and MinK water control layer are installed prior to the chosen surface finish. A range of finishes are possible, including paving, ballast, timber decking and Radmat MedO living green roofs.

A flexible neoprene strip is applied to the angle changes at perimeters and detailing, this facilitates minor movement and prevents cracking. Perimeter upstands are finished with ProTherm SD Upstand Board, an extruded polystyrene foam insulation factory laminated to a 6mm thick weather resistant high impact facing board, installed to provide an aesthetic thermal finish that prevents cold bridging.



Winchester Place, London

- Completely seamless monolithic bond so water cannot track within the system
- Upstands can be installed first allowing other trades to swiftly progress with the building's fabric
- Excellent low-temperature flexibility and adhesion characteristics
- Once covered with a protection sheet can be opened up to following trades delayed by inclement weather and speeding up site programming
- High compressive strength – ideal for high trafficked areas and plant rooms
- Self-heals minor damage under applied loads
- Quick application and no curing time leaves roofs instantly water tight

EshaFlex/ EshaGum

EshaFlex SBS and EshaGum APP are innovative Modified Reinforced Bitumen Membranes engineered to meet the demands of the 21st Century.

Achieving Green Guide to Specification A+ ratings, and BBA Certified, environmental credibility and ease of installation are supported by patented 'groove technology'. This technology typically reduces gas consumption by 25% (45 grams per m²), reduces CO₂ production by 168 g/m² and reduces installation times by up to 30%.

Reinforced Bitumen Membrane



Single Layer Overlay Systems for existing roofs

Partially Bonded: EshaFlex TK60 vapour pressure distribution cap sheet installed over a suitably prepared existing roof to prolong the life.

Fully Bonded: mineral finished EshaFlex 370 or EshaGum 470 cap sheet installed over a suitably prepared existing roof to prolong the life, typically used in high wind uplift areas or on tall buildings.

Mechanically Fixed: black mineral finished EshaFlex 370 MF cap sheet fastened through a suitably prepared existing roof construction in to the substrate.

Green Roofs for new or existing roofs

Sand finished EshaFlex 370 'Plain' base sheet and FLL Certified EshaFlex 370 WS Mini Slate cap sheet either partially bonded, fully bonded or mechanically fastened and finished with a Radmat MedO extensive, biodiverse or intensive green roof system, subject to loadings.

Upgrade Systems for new or existing roofs

Partially Bonded: two layer systems combining EshaVent or EshaFlex TK40 thermo adhesive vapour pressure layers with a mineral finished EshaFlex 370 or EshaGum 470 cap sheet.

Fully Bonded: sand finished EshaFlex 370 'Plain' or EshaGum 470 'Plain' base sheet with a mineral finished EshaFlex 370 or EshaGum 470 cap sheet.

Inverted, Paved and Ballasted systems for new or existing roofs

Two layers of sand finished EshaFlex 370 'Plain' or EshaGum 470 'Plain' fully bonded prior to the installation of the surface finish. In an Inverted roof Radmat ProTherm insulation and MinK Water Resistant Layer are installed prior to application of the roof finish. In a warm roof the finish is applied directly over the completed roof membrane, subject to loadings.

Used widely throughout Europe and the UK since the 1970's, EshaPlan single ply membranes provide design freedom whilst achieving long term waterproofing integrity and high levels of environmental performance.

Suitable for flat, pitched, curved or geometrically shaped roofs in both new build and refurbishment applications, EshaPlan membranes are BBA Certified for 'in excess of 30 years', can achieve a BRE Green Guide to Specification A+ ratings and incorporate factory recycled production waste.



EshaPlan MF



EshaPlan B with Profile 25

Available in Light Grey (RAL7001) and Lead Grey (RAL7015) as standard, other colours available to order, EshaPlan membranes are completed by a range of compatible accessories including; unreinforced detailing membrane (EshaPlan D), membrane coated metal (EshaMetal) and a range of adhesives, compatible rainwater outlets and lightning conductor clips.

Mechanically Fixed

EshaPlan MF is a polyester carrier reinforced mechanically fastened PVC-P single ply membrane that is typically installed on larger scale warm roof constructions where speed of installation is a key requirement or projects where wind uplift is high. Available in rolls up to 2.12m wide and 20m long, and a range of thicknesses from 1.2mm to 2.0mm, EshaPlan MF is attached to the substrate using thermally broken fasteners installed at project specific pre-determined centres to achieve a fast method of attachment without thermal bridging. Subsequent rolls will overlap the fastening zone and be hot air welded together to produce a sealed seam that is stronger than the membrane itself.

Fully Bonded

EshaPlan B and EshaPlan FB are glass fibre reinforced bonded PVC single ply membranes typically used on smaller scale warm roofs.

Where aesthetics are a key requirement fleece backed EshaPlan FB should be used as it helps to hide irregularities in the surface such as insulation board joints and tolerances.

Available in rolls up to 2.12m wide and 20m long, and a range of thicknesses from 1.2mm to 2.0mm, EshaPlan adhered membranes are attached to the substrate using EshaBond CA or EshaBond PU adhesive depending on application. As they are installed subsequent rolls are overlapped and hot air welded in the same way as EshaBond MF.

EshaPlan can also be used to mimic the appearance of a traditional Lead roof by adding Profile 25, an extruded profile that is simply hot air welded to the finished membrane to imitate the appearance of a traditional Lead standing seam.



EshaPlan B

Esha Universal

Single Layer Membrane

EshaUniversal is a low mass, lightweight, strong, flexible, and extremely stable single layer roof covering manufactured from polyolefin copolymerisate bitumen (POCB).

This special compound creates a 3.2mm thick heat weldable membrane, reinforced with polyester and glassfibre, suitable for new build or refurbishment applications on flat or pitched roofs.



UV resistant, without the need for surface protection, EshaUniversal can be applied rapidly to insulation, timber, concrete decks, or used as an overlay to existing bituminous roofing systems.

Fully Bonded

Standard EshaUniversal is fully bonded to a suitable insulation board or suitably prepared existing waterproofing using an EshaBond adhesive, either roller or spray applied. Subsequent rolls of EshaUniversal overlap by 130mm and are hot air welded.

Mechanically Fixed

Standard EshaUniversal is mechanically fastened along one edge, through a suitable insulation board or suitably prepared existing waterproofing, using the appropriate Radmat ProFast fasteners. Subsequent rolls of EshaUniversal overlap the fastening zone by 130mm and are hot air welded together.

Green Roofs for new or existing roofs

EshaUniversal WS, an FLL certified root resistant membrane specifically for green roof applications can be loose laid, mechanically attached or fully bonded prior to the application of a Radmat MedO extensive, biodiverse or intensive green roof system (subject to loadings).

Inverted, Paved and Ballasted systems for new or existing roofs

Standard EshaUniversal can be loose laid, mechanically attached or fully bonded prior to the application of the desired surface finish. In an Inverted roof Radmat ProTherm insulation and Mink Water Resistant Layer are installed prior to application of the roof finish. In a warm roof the finish is applied directly over the completed roof membrane.

EshaUniversal is BBA Certified, has a life expectancy of up to 30 years and is fully recyclable producing a favourable Life Cycle Assessment, and meeting the strictest standards for sustainable construction; contributing to Green Guide to Specification A+ ratings and reducing the building's environmental impact.

ParaFlex

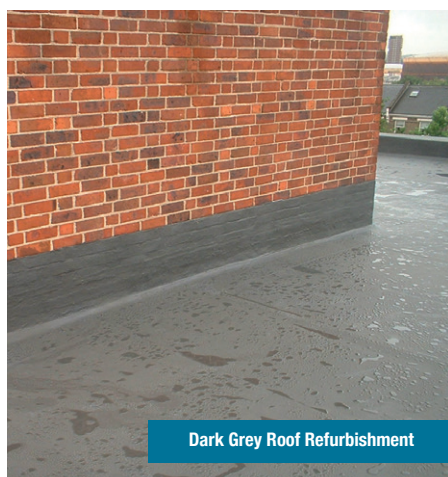
Liquid Applied Membrane

ParaFlex is a fast curing, cold applied polyester resin waterproofing system suitable for both new build and refurbishment applications.

Designed for application either directly to a suitable substrate, over an existing waterproofing system or onto a suitable thermal insulation. ParaFlex can even be installed to zero falls in accordance with BBA Agreement certificate 09/4653 in an inverted or warm roof application.



Light Grey Roof Refurbishment



Dark Grey Roof Refurbishment

Manufactured in Germany since 1976 ParaFlex is BBA Certified for 'at least 35 years' in exposed applications and 'for the design life of the roof' for inverted roof applications.

Mixed on site and applied in a 'wet on wet' application to encapsulate either a non-woven polyester or glass fibre carrier layer, ParaFlex doesn't require a cure time between coats; speeding application and creating a continuous monolithic membrane that is fully bonded to the substrate. Available in either black or light grey as standard (with other colours on request) the ParaFlex mix is adjusted to suit the weather; enabling ParaFlex to be installed in temperatures as low as -5°C.

Once completed the FLL Certified ParaFlex system can be left exposed or, in inverted applications, finished with a Radmat MedO living green roofs, pavers or ballast. Where used as a self-finish in exposed applications, a hard wearing walkable surface for walkways or balconies can also be created by scattering the final coat with coloured microchips for a pleasing aesthetic, or with kiln dried sand for delineation, or to provide a textured surface.

ParaFlex can also be used to provide long lasting waterproofing to water features, fountains or any other structure that is designed to hold and retain water.

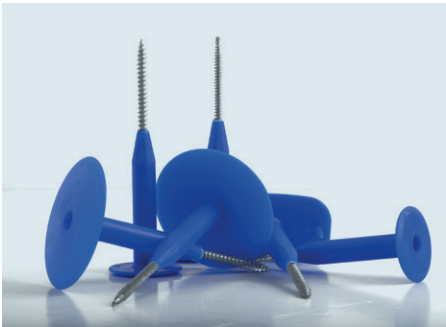


New Light Grey Balconies

- Suitable for balconies and walkways
- Suitable for warm roofs
- Suitable for vertical applications and complex shapes and details
- Light foot traffic possible after 30 minutes, completely trafficable within 90 minutes.
- No curing time required between coats
- Suitable for green roof and roof garden applications
- Root resistant
- Will accommodate minor movement without damage
- Suitable for light foot traffic and light concentrated loads

Ancillary Components

To complement its waterproofing systems Radmat Building Products supplies a comprehensive range of compatible ancillary components and services, all covered by Radmat's unique system guarantee.



ProFast

Mechanical fastening solutions for Radmat thermal insulation and waterproofing systems, comprising self-coated steel and stainless steel fasteners, thermally broken tube washers, termination bars and specialty fasteners

ProSafe

Roof safety equipment for maintenance and access, including fall prevention, fall arrest and fall restraint systems.

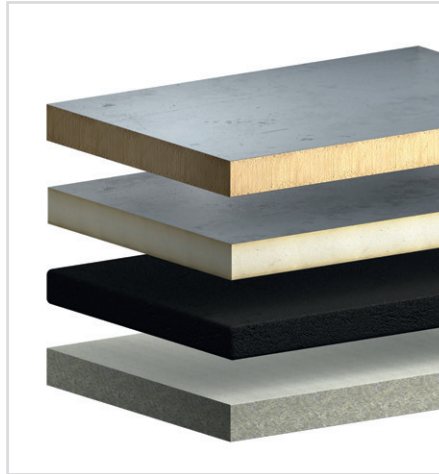


ProFlow

Gravity and Siphonic Rainwater outlets for roof, parapet wall and balcony applications. Available in a range of sizes and types to suit all Radmat waterproofing systems, and incorporating the ProGuard range of leafguards.

ProScan

Thermographic and moisture mapping surveys to establish the condition of existing roofs.



ProTherm

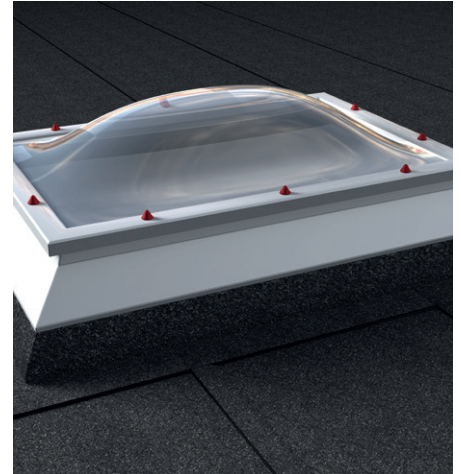
A range of thermal insulation boards for warm and inverted roof applications including;

ProTherm Inverted Roof Board, ETAG 031 compliant Extruded Polystyrene (XPS) insulation manufactured and tested in accordance with BS EN 13164:2012, and ISO 14001 certified. Thermal conductivity 0.032 W/m²k.

ProTherm PIR; a range of BS EN 13162:2012 compliant, ISO 14001 certified polyurethane foam insulation boards. Available as uniform thickness or tapered boards with foil, bitumen coated or mineral coated glass fibre facings. Thermal conductivity from 0.026 W/m²k to 0.024 W/m²k.

ProTherm MW; multi-purpose mineral wool insulation compliant with BS EN 13165:2012, ISO 14001 certified and LPS1181:Part 1 EXT – A rating. Available as uniform thickness or tapered boards. Thermal conductivity of 0.039 W/m²k.

ProTherm CelGlas; cellular glass insulation compliant with BS EN 13167:2012, and ISO 14001 certified. Available as uniform thickness or tapered boards. Thermal conductivity from 0.045 W/m²k to 0.041 W/m²k.



ProLight

The ProLight range of rooflight components provides a range of flat roof windows, skylights, modular or specialist rooflights tubular rooflights that are suitable for new and refurbishment projects, and can be fitted with a variety of ventilation, access and security options.

The range includes;

ProDome thermoformed polycarbonate single, double, triple and quadruple skinned lights in domed, pyramid and trapezoidal shapes.

ProCurb, a range of thermally broken PVC-u upstand curbs to suit new build and refurbishment applications.

ProGlaze, 32mm hermetically sealed Low E, argon filled flat double and triple glazed lights.

ProTube tubular rooflights to transfer light to targeted locations.

The benefits of living green roof systems are widely published; including their contributions to rainfall management, habitat creation aiding biodiversity, CO₂ capture, absorption of solar radiation, amenity provision, improved aesthetics, summer cooling, whole life cost savings, pollution control, oxygenation and noise reduction.



MedO Extensive



MedO Planted Biodiverse



MedO Intensive



Library of Birmingham

Working with expert horticulturalists, Radmat Building Products have developed the MedO range of living green roofing systems. All systems are suitable for both new and refurbishment projects and are constructed using the appropriate drainage board, filter fleece and growing medium for the planting required.

MedO Extensive Living Green Roofs

Suitable for flat and pitched roof applications MedO Extensive systems provide a low maintenance, self-sustaining plant community, achieved in one of three ways depending on budget and patience. Pre-grown sedum blankets provide instant cover. Pre-grown sedum plug plants provide greater diversity but only 10% to 20% cover at installation. Seeding is most economic with 40% to 60% cover taking 12 – 18 months.

MedO Planted Biodiverse Living Roofs

planted Biodiverse roofs are typically designed to meet specific requirements, often driven by planning constraints or Biodiversity Action Plans (BAP's), usually to imitate the original ground conditions. Additional features such as insect houses, boulders, shrubs, tree branches etc., to create habitat for insect and bird species, may be included in the specification.

MedO Brown Biodiverse Living Roofs

Suitable for new and refurbishment projects MedO Brown living roofs are constructed as per Planted Biodiverse roofs but simply left to nature to seed rather than being forcibly planted at installation. Plant cover will be entirely based on wind-blown and bird brought seed, taking a significant time to gain plant cover but being entirely natural once established.

MedO Intensive Living Green Roofs

Typically installed to provide recreational or public amenity space Intensive green roofs are the heaviest and most maintenance intensive green roofs, with substrate depths over 300mm deep to accommodate planting typical of gardens and parks, including shrubs and trees. In common with landscaping at ground level multiple design possibilities can be accommodated, including paving, decking, planters, ponds and water features.

TredWay

Modular Paving System

TredWay is a lightweight, low profile modular paving system comprising a unique water-permeable modular rubber base and a range of stone cast slip resistant tiles. Suitable for installation over hot melt, asphalt, bitumen felt, single ply and cold applied waterproofing; TredWay is an ideal solution for refurbishment, conversion or new construction applications.

Simple to install, maintenance free and water-permeable to allow integration with existing drainage systems TredWay is suitable for terraces, balconies, podiums and roof gardens. Its robustness, slip resistance and chemical resistance also make it suitable for garages, car parks and swimming pool surrounds; in fact anywhere an instant high quality paved area is required.



With its low 31mm height, TredWay can also resolve height concerns, a common consideration at door thresholds and low parapets where a traditional option may take up at least twice the space.

UKAS accredited and compliant with Approved Document E of the Building Regulations, the modular TredWay base pad reduces airborne and impact sound through the system. This is especially important where a terrace or roof balcony is above a habitable space.

Production of TredWay modular matting is ISO 14001 certified with waste from production eliminated through re-processing of all off-cuts, eliminating waste material contribution to landfill. TredWay also has Zero Ozone Depletion Potential (ODP) and Zero Global Warming Potential (GWP).



Suitable substrates include:

- Suitable for refurbishment and new construction
- Excellent aesthetic qualities
- Wide range of colours and textures
- Can be laid over existing substrate saving time and cost
- Long lasting and durable
- Low structural height (ideal for refurbishment applications where height restrictions may apply to doorway openings, parapets etc.)
- High impact sound insulation and excellent acoustic qualities
- Precise joint and tile positioning
- Water-permeable with drainage grooves to allow integration with existing drainage systems
- Completely frost resistant
- Fast and simple installation
- Lightweight and easy to handle
- Essentially maintenance-free
- Easy to clean
- Wide range of colours and textures
- Replacement tiles available



guaranteed
roofing
solutions

*liquid applied
insulation
green roof
single layer*

single ply

hot melt

brown roof

*roofing systems
biodiverse roof*

reinforced bitumen



Radmat Building Products Ltd, Esha House, St. Mary's
Business Park, Albany Road, Market Harborough LE16 7EB

PHONE 01858 410372

FAX 01858 410572

techenquiries@radmat.com

www.radmat.com