



ROOFING  
SikaShield®  
BITUMINOUS ROOFING SYSTEMS

**BUILDING TRUST**





# SikaShield® BITUMINOUS MEMBRANES

Bituminous membranes to suit all types of application for flat roofs, decks and podiums

Most roofs are exposed every day to arduous conditions and can get damaged and deteriorate over time. It is the most critical area of a building or structure, which protects the users and interior from the elements, and must be well-selected. It is one of the most critical areas of the building or structure, which protects the users and interior from the elements, and must be designed, installed and maintained to a high standard.

Approximately  
**60%**  
of the flat roof market worldwide is made up  
by bitumen-based technologies.

In the UK, bitumen makes up over  
**55%**  
of the flat roof market.

Thanks to its waterproofing qualities, reinforced bituminous membranes are widely used in construction to waterproof flat roofs, green roofs, terraces and balconies, and podiums.

SikaShield® products are fully bonded to the substrate, to provide a long lasting roofing solution.



SikaShield® bituminous membranes are not only durable against wind, rain, and other environmental conditions, but they also come with decades of expertise and support.

NEW BUILD FLAT ROOFS



FLAT ROOF REFURBISHMENT





TERRACES/PODIUMS



GREEN ROOFS



## SikaShield® Reinforced Bituminous Membrane Benefits

 <b>35+</b> YEARS BBA certified product life expectancy 'In excess of 35 years'	 <b>100</b> YEARS 100 Years bitumen expertise	 Hybrid capsheet - SBS and APAO technology
 Extensive guarantees	 Technical services and on-site support	 Safe2torch compliant



# SikaShield®

## Features and benefits

SikaShield® membranes are made by combining a polymer-modified bituminous compound with a reinforcement, and then protected by an upper and under layer surface depending on the type of membrane selected, leading to a wide range of possibilities depending on where and how it is to be used.

The combination of all these layers can offer the membrane a variety of physical characteristics by changing the heat resistance, flexibility, viscosity, softness and mechanical resistance, allowing different levels of performance to be achieved according to the needs of the project.

The aesthetic finish is another significant advantage of the product range. The plain or smooth finishes guarantees an optimum adhesion of the subsequent layers, while the mineral granules offer protection to a variety of long term environmental conditions such as UV degradation.



1. Upper layer: mineral, sand, or polyethylene foil
2. Bituminous compound
3. Reinforcement: fibreglass, polyester and/or aluminium
4. Bituminous compound
5. Under layer: foil (torch layer) or removable film (self-adhered)

The combination of all these layers can offer the membrane a variety of qualities by changing the heat resistance, flexibility, viscosity, softness and mechanical resistance.

## MAIN ADVANTAGES:

 HIGH PUNCTURE RESISTANCE	 UV-RESISTANT	 TRAFFICABLE
 BBA CERTIFIED	 CAN BE INSTALLED ON VARIOUS ROOF TYPES	 EASY TO MAINTAIN / REFURBISH
 TORCH-APPLIED OPTIONS	 HIGH DURABILITY	 BRooft4
		 SELF-ADHESIVE OPTIONS

## Safe2Torch Compliant

Safe2Torch is an NFRC campaign to promote best practice when designing and installing roofs. The guidelines clearly explain roof areas where it is not safe to torch. These include:

- Timber roof decks and roof areas with timber upstands or timber fillets
- Hanging tiles
- Thatched roofs
- Rooflight kerbs and upstands
- Cladded areas
- Lantern rooflights
- Window sills
- Any confined space

The guidelines also caution against the use of torch-applied systems where there is any possibility that the flame could ignite concealed flammable materials in inaccessible areas, such as:

- Louvered vents, air ducts, intakes and outtakes
- Timber, DPC, or sarking membranes beneath fixed metal capping systems
- Existing kitchen extraction plant that is coated in oils or fats
- Flammable wrapping to trunking or ducting
- Existing metal or plastic copings or cappings
- Existing vulnerable plastic curbs, domes or pipes

To comply with Safe2Torch guidelines, hot air applied or self-adhesive membranes must be used on any areas within 900mm of these high-risk locations, and a correct installation technique must be used in order to guarantee the safety and security of installation teams, occupants, and the building fabric.

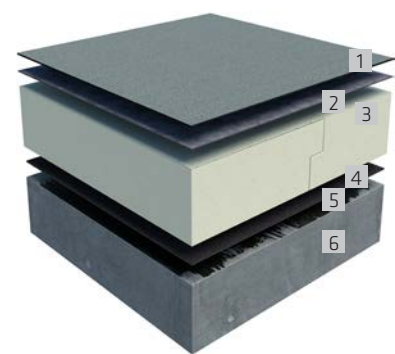


# REINFORCED BITUMEN FLAT ROOF BUILD-UPS

Warm and Inverted system build-ups

In a **warm roof** build-up where reinforced bitumen is used as the waterproofing layer, the waterproofing membranes protect the thermal insulation, while an underlying air and vapour control layer manages air and vapour transmission from the warmer space below.

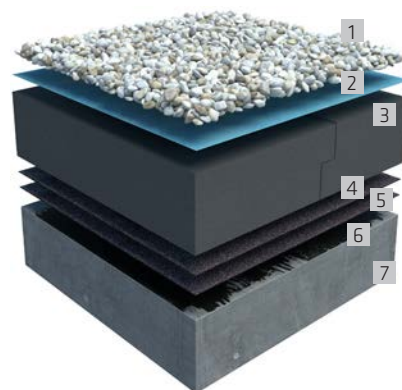
## WARM ROOF BUILD-UP (REINFORCED BITUMINOUS MEMBRANES)



- 1. SikaShield® Cap Sheet
- 2. SikaShield® Underlay
- 3. Sikatherm® Insulation
- 4. SikaShield® Air and Vapour Control Layer (AVCL)
- 5. Sika® Primer
- 6. Structural Deck

In an **inverted roof** build-up, the insulation is loose laid on top of the waterproofing membrane. The loose laid ballast/paving and water flow reduction layer protects the insulation from elements such as wind and rain. An inverted roof system is usually the best solution where the roof area will be used for an additional purpose i.e. a roof top communal area. In an inverted thermal design, the insulation remains at, or close to the ambient external temperature.

## INVERTED ROOF BUILD UP (REINFORCED BITUMINOUS MEMBRANES)



- 1. Ballast/Paving
- 2. Water Flow Reduction Layer
- 3. Sikatherm® Insulation
- 4. SikaShield® CapSheet
- 5. SikaShield® Underlay
- 6. Sika® Primer
- 7. Structural Deck

# HOT MELT FLAT ROOF BUILD-UP

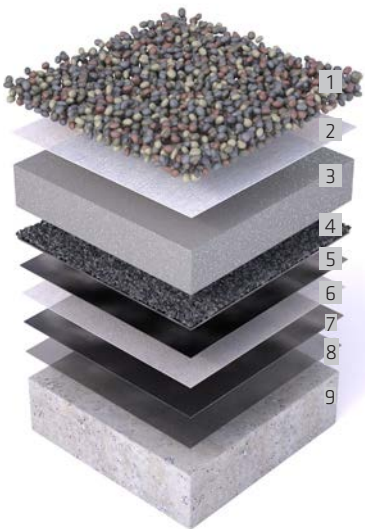
Inverted system build-up

In an inverted build-up, the waterproofing system is protected from external elements by a loose laid finish, i.e. ballast or paving slabs. This system design has a positive effect on the aging behaviour of the full system, and thus extends the life expectancy of the waterproofing membrane.

Hot melt structural waterproofing is used in an inverted build-up as the waterproofing layer.

If insulation is installed, this is laid above the waterproofing membrane and has to withstand the elements such as rain or snow' and wet weather. Therefore, insulation types such as cellular glass, XPS, EPS, are suitable due to their closed cell structure. It is critically important to properly install an adequate Water Flow Reduction Layer (WFRL) to manage the flow of surface water to the outlets, to not impede the performance of the insulation during periods of adverse weather.

## INVERTED ROOF BUILD UP (HOT MELT STRUCTURAL WATERPROOFING)



- 1. Ballast/Paving
- 2. Sika Water Flow Reduction Layer
- 3. Sikatherm Insulation
- 4. SikaShield® Access/Protection Layer
- 5. SikaShield® Hot Melt Structural Waterproofing
- 6. SikaShield® Roof F-50 Reinforcement Fleece
- 7. SikaShield® Hot Melt Structural Waterproofing
- 8. Sika®Roof Primer
- 9. Structural Deck

## SikaShield® Hot Melt Structural Waterproofing Benefits



Durability of design  
life of the roof



Year round  
application



Non tracking-  
Monolithic



Extensive  
guarantees



Technical services  
and on-site support



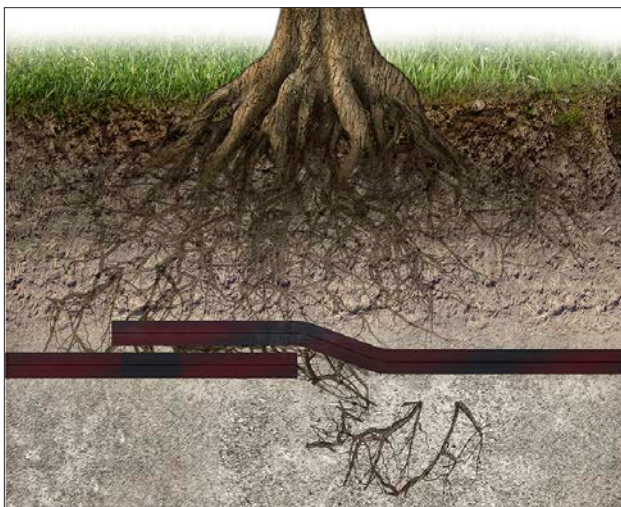
Outstanding  
Durability



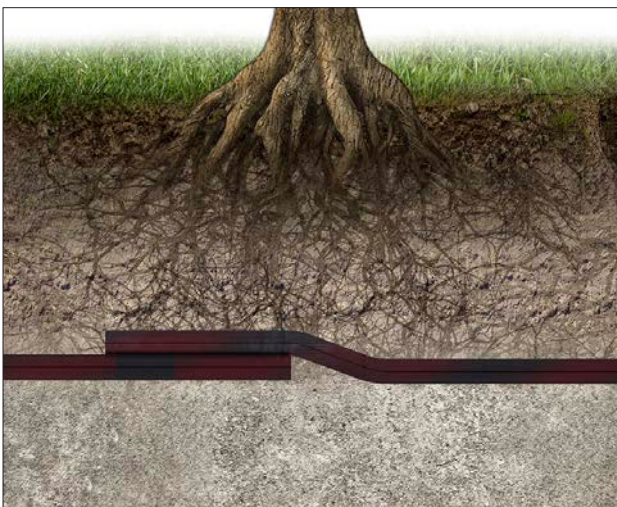
# GREEN ROOF BUILD-UPS

System build-up

At Sika, our aim is to support in building for a sustainable future. A green roof has many environmental benefits and, when used in conjunction with one of our Sika waterproofing solutions, provides a sustainable roofing system for either a new build or refurbishment project.



Non-root resistant membranes



SikaShield® root barrier

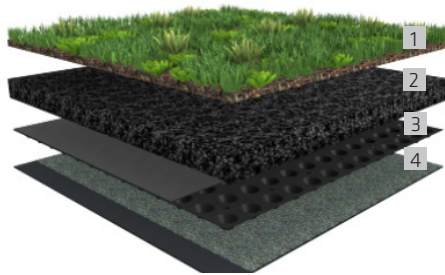
## Sika Green Roof Project



# SIKA GREEN ROOF SYSTEMS

System build-up

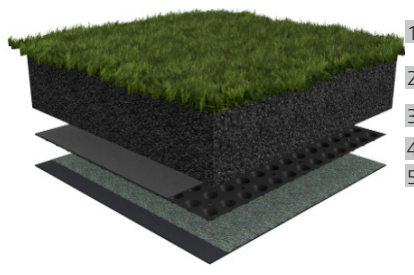
## EXTENSIVE GREEN ROOF



1. SikaRoof Extensive Blanket UK
2. SikaRoof Substrate Extensive UK
3. SikaRoof Rigid Drainage Layer 20 UK
4. Sika Roof Protection Fleece P-225 UK

- Most common green roof plant species
- The hardest plants; they are not nutrient hungry
- Low maintenance plant species
- Designed to be lightweight, reducing the overall structural loading
- Perennial plant
- Pre-grown sedum blankets with 12 species sown

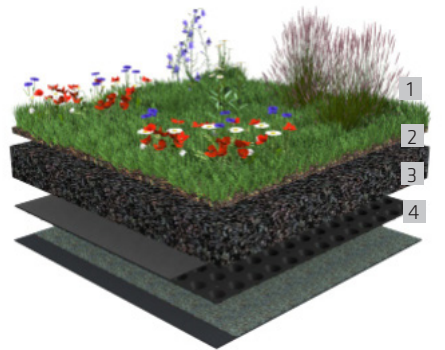
## INTENSIVE GREEN ROOF



1. Turf/Planting
2. SikaRoof Substrate Intensive UK
3. SikaRoof Filter Fleece F-120 UK
4. SikaRoof Rigid Drainage Layer 40 UK
5. SikaRoof Protection Fleece P-225 UK

- Greater variety of vegetation
- Hard and soft landscaping
- Requires regular maintenance and irrigation
- Suitable for recreational activities
- Heavier than other types of green roof – almost always concrete roof or podium deck
- Soft landscape can retain up to 90% of rainfall

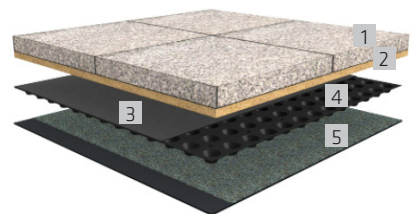
## BIODIVERSE GREEN ROOF



1. SikaRoof Wildflower Blanket UK
2. SikaRoof Substrate Biodiverse UK
3. SikaRoof Rigid Drainage Layer 20 UK
4. SikaRoof Protection Fleece P-225 UK

This specific type of green, brown or 'living' roof typically either tries to replicate as closely as is practical the ecological environment of the site where construction has taken place, or sets out to create a natural habitat to support a variety of plants, birds, animals and invertebrates.

## HARD LANDSCAPING ROOF



1. Hard Landscaping
2. Sand/Cement Blinding
3. SikaRoof Filter Fleece F-120 UK
4. SikaRoof Rigid Drainage Layer 40 UK
5. Sika Roof Protection Fleece P-225 UK

- Suitable for heavy traffic, both foot and vehicular
- Rainwater is directed down to the high performance drainage board to the waterproofing
- Suitable for a variety of finishes - tarmac, paving etc.
- Can be combined with soft landscaping or planters for "different types of hard landscape finishes"



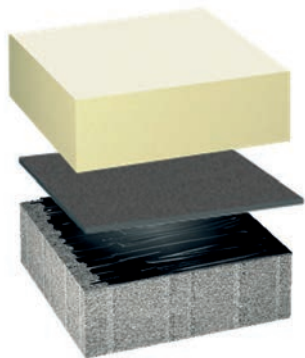
# ADDITIONAL PRODUCTS

# Sika Service and Support

A full range of accessories are available to complete the waterproofing systems, such as vertical and horizontal outlets and cable access pipes for safe integration of roof openings such as ventilators, railing supports, guardrails, lightning protection, etc.

### ROOFING INSULATION

In the vast majority of both new build and refurbishment projects, the presence of insulation is either considered or required. Approved Document L of the Building Regulations provide more information on where insulation is required and what target or U Value must be achieved.



### APPROVED DOCUMENT L

It is important to note, that these regulations are regularly revised, so the latest version should always be consulted. Sika has a wide variety of insulation types to suit all flat roofing applications, within the Sikatherm® range. Sikatherm® is suitable for mechanically fixed, adhered and ballasted flat roofing types, and is compatible with all of our waterproofing solutions; reinforced bituminous membranes and hot melt structural waterproofing alongside our single ply and liquid applied membranes. In addition to the provision of flat boards, Sikatherm® can also be supplied as a bespoke tapered insulation scheme, where falls are required. For inverted roof build-ups, EPS, XPS and cellular glass insulation is available.

We offer thermal calculations and condensation risk analysis for every project, to ensure performance is guaranteed as well as security from harmful condensation.

SikaShield® Overflow Round and Square



SikaShield® Renovation Drain



SikaShield® Scuppers Round and Square



SikaShield® Roof Insulated Outlet (specifically for use with our Hot Melt Structural Waterproofing systems)



### RANGE OF GUARANTEES

At Sika Roofing, we offer a range of very comprehensive guarantees for projects.

Our Product Guarantee, provides comprehensive cover that the membranes supplied fulfil their waterproofing function, and that all other Sika branded products are compatible with the membranes and fulfil their respective function within the roof build-up.

Our Performance and Performance Plus Guarantees incorporate bespoke design factors such as wind load calculations, U-value calculations and condensation risk analysis and bespoke project details. Design and specifications are backed by our Professional Indemnity (PI) Insurance.

### STRAIGHTFORWARD TERMS AND CONDITIONS

Our terms and conditions are laid out in a very easy to understand manner and are included in every guarantee.

### TRAINED ROOFING CONTRACTORS

When we offer a guarantee, we specify that the whole system must be installed by a Sika Certified Roofing Contractor or Verified Contractor. This gives our clients the peace of mind that the installing contractor has been trained to use our products correctly and safely. These projects will also be thoroughly inspected by our Sika Technical Site Support Team before guarantees are issued. Our highly experienced Site Support Engineers are entirely dedicated to training our contractors and carrying out comprehensive site inspections. This is a free of charge service and is a requirement of the guarantee.

### SIKA ROOFING TECHNICAL SERVICES

The Roofing Technical Services Team provides support by checking and producing SikaShield® Specifications, drainage and insulation cut to falls & U value calculations. In addition they will be able to assist in providing CAD drawings and Health and Safety information. The team are also there to check material orders and to answer any of your technical queries.

### Sika Roofing – Training & Site Support

A Range of Roofing Solutions

- LIQUID APPLIED ROOF SYSTEMS
- SINGLE PLY ROOF SYSTEMS
- REINFORCED BITUMINOUS ROOF SYSTEMS
- HOT MELT STRUCTURAL WATERPROOFING SYSTEMS
- CELLULAR GLASS ROOF SYSTEMS

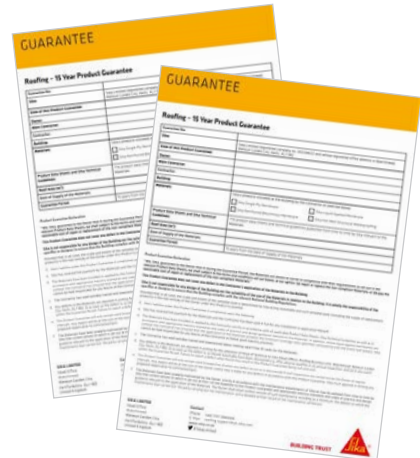
18 Members and 1 Training Apprentice

4,564 Site Support Engineer Visits

527 Contractors Trained at the Sika Training Academy

52 Contractors Attended On-Site Training Support Vehicle Workshops

500+ Years of Roofing Knowledge and Experience



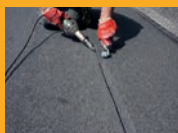
# SIKA FULL RANGE SOLUTIONS:



LIQUID APPLIED  
ROOFING



SINGLE PLY ROOFING



BITUMINOUS ROOFING



CONCRETE



CONCRETE REPAIR



STRUCTURAL  
STRENGTHENING



BUILDING FINISHING



WATERPROOFING



JOINT SEALING



FAÇADES



FLOORING



INDUSTRY



DISTRIBUTION



MODULAR/OFFSITE



## WHO WE ARE

Sika Limited and Sika Ireland Limited are part of the global Sika Group, specialising in the manufacture and supply of chemical based products. Sika has a global leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing, and protecting in the building sector and motor vehicle industry. Sika has subsidiaries in 103 countries, manufactures in over 400 factories, and develops innovative technologies for customers around the world that facilitate the sustainable transformation of the construction and transportation industries. With more than 33,000 employees, the company generated annual sales of CHF 10.5 billion (£9.4 bn) in 2022.

In the UK and Ireland, we provide market-leading solutions for building finishing, concrete, waterproofing, roofing, flooring, refurbishment, sealing & bonding, and industry, and have manufacturing sites in Welwyn Garden City, Preston, Leeds, Wishaw, Redditch, and Dublin with more than 900 employees and a turnover of more than £420 million.

The information, and, in particular, the recommendations relating to the application and end use of Sika® products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The proprietary rights of third parties must be observed. Please refer to our homepage [www.sika.co.uk](http://www.sika.co.uk) for our current standard terms & conditions applicable to all orders. Users should always refer to the most recent issue of the Product Data Sheet for the product concerned, copies of which will be supplied on request.



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