ROOFING
SIKA TECHNOLOGY AND CONCEPTS FOR ROOFING

BUILDING TRUST

SIKA TECHNOLOGY AND CONCEPTS FOR ROOFING

As a leading worldwide materials manufacturer for the construction industry, Sika has a strong focus on roofing and produces a wide range of different products and systems to meet our customers' requirements and conform to the latest-standards. This brochure illustrates our basic range of high performance solutions in this field developed from more than 50 year experience in roofing and incorporates the latest technologies.

We are present locally in more than 90 countries, which allows us to bring our customers and their clients not only proven roofing products, but additional services, such as wind load calculations, application trainings, CAD details, BIM objects and technical consultations, guarantees, etc. Sika is the only full range materials supplier for materials used in concrete production, waterproofing, roofing, flooring, sealing, bonding, grouting, reinforcing, concrete repair and protection, structural glazing and more, for all types of buildings and civil engineer structures. This makes us the most complete and competent partner for the new construction or refurbishment of your projects.

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SIKA ROOFING – MORE THAN 50 YEARS SUCCESS

KEY FIGURES

Total annual roof area applied: 80 millions m^2 (bigger than the total area of Manhattan)

MAIN TECHNOLOGIES

PVC membranes

TPO membranes

Liquid applied membranes (1-C PU, 2-C PU, Acrylic)

Bitumen

SIKA'S MILESTONES IN ROOFING

1962 Roofing business started in Switzerland

2000 Trocal was acquired

2005 Sarnafil was acquired

2006 Sucoflex was acquired

2008 Liquid Plastics (UK) was acquired

2010 Dyflex (Japan) was acquired

2011 Yeanil (Korea) was acquired

2013 Texsa (Mexico/India) was acquired

2014 Lwart (Brazil) was acquired

2017 Bitbau DÖRR (Austria) was acquired

2017 Rmax (USA) was aquired

Project year: 1981 | Australian Institute of Sport AIS Arena Canberra, Australia

Project year: 1967 | Nuova Biaschina Hydroelectric Plant, Personico, Switzerland | Sarnafil® G 410-12

THE DURABILITY AND LONG LIFE SPAN: SIKA MEMBRANES ARE PROVEN BY FACTS AND FIGURES

Sika has a decade-long tradition to take Sarnafil® roofing membrane samples from certain roofs in North America and Europe to document durability of Sika's roofing membranes in exposed applications. With average tested roof age being over 20 years old, the oldest is 49 years old, which was installed in 1967 on a project in Persoucio, Switzerland using Sarnafil® G 410-12 PVC membrane.

Considering the age and the condition of the roofs analyzed, the data indicates that a properly formulated, properly maintained, reinforced vinyl roof membrane system performs in excess of 20 to 30 years in various climates throughout Europe and North America.

Durability is a key component of sustainability. The longer a product lasts, the better it generally is for the environment, providing its original production and embodied energy create minimal environmental impact.

Durability adds value to a property. The highest quality watertight roof nearly always enhances property value.

Durability means low overall cost of ownership. Because of their longevity and durability, Sika membranes are very cost effective over the life of the roof. They are very resistant to most climate exposure. Maintenance costs are therefore minimal, so owners can have peace of mind.

A selection of long lasting roofing projects showcasing proven durability:

- Installed in 1967 – Sarnafil G 410-12 on project in Persoucio, Switzerland
- Installed in 1976 – First United Methodist Church in Gilford, New Hampshire, UK
- Installed in 1978 – Sarnafil S 327-12 on beer brewery in Memmingen, Germany
- 32 years in service till replaced in 2010, installed in 1978 – Pitman Company facilities in Woburn, MA, USA (replaced with another Sika Sarnafil system in 2010)
- Installed in 1980 – Brookshire Grocery Company in Tyler, Texas, USA
- Installed in 1980 – Australian Institute of Sport AIS Arena in Canberra, Australia
- 35 years of service – installed in 1981 – Winthrop Elementary School in Hamilton, Massachusetts, USA
- 25 years of service till replaced in 2014, installed in 1988 – Sarnafil G 410-12 on Saddle Dome in Calgary, Canada

SIKA'S CAPABILITIES FOR DIFFERENT BUILDING TYPES AND ROOF APPLICATIONS

	COMMERCIAL AND INDUSTRIAL BUILDINGS (SHOPPING, LOGISTIC CENTERS, FACTORIES)	SPORT AND LEISURE FACILITIES
EXPOSED ROOF		
GRAVEL BALLASTED ROOF		
GREEN ROOF		
UTILITY ROOF DECK		

RESIDENTIAL BUILDINGS

HEALTHCARE, EDUCATIONAL AND OTHER PUBLIC BUILDINGS

SOLUTIONS FOR YOUR PROJECT IN A FEW STEPS

WE PROVIDE INTEGRATED, FULLY COMPATIBLE PRODUCTS
for your various construction projects, from basement to roof, in building and infrastructure construction worldwide. Scan the QR code below to open our SikaSmart City online selection guide to find expert material solutions and references.

STEP 1: Select the project type in the SikaSmart city

STEP 2: Select the building element

MANUFACTURING FACILITY

HEALTHCARE FACILITY

MULTI-USE BUILDING
(highrise commercial and residential building)

... AND MORE PROJECT TYPES

STEP 3: Select the application

View after clicking on "Roof"

View after clicking on "Roof"

View after clicking on "Building Envelope"

View after clicking on "Roof"

STEP 4: Review the search results

You will land on pages listing the corresponding Sika systems as options for the application you need. Here are some examples of such systems.

STEP 5: Contact your local sales and technical department to specify your selected systems

Please always visit your local Sika website to get your local solutions or contact our local sales and technical department to analyze your project situation and give you direct expert advice. Each project has its own requirements, and Sika's experienced engineers can help you make the right decision among the options.
Added values for you:

- Standard or tailored CAD and 3D detailing drawings
- Standard or tailored BIM objects
- Onsite inspection and investigation
- Life cycle cost evaluation and comparison

IF YOU ARE ONLY LOOKING FOR ROOFING SYSTEMS:

SIKA AS GLOBAL LEADER IN ROOFING MATERIAL TECHNOLOGY

SINGLE PLY MEMBRANES

TYPE	PVC	FPO
	PVC membranes	Polyolefin membranes
BRAND NAMES	Sarnafil®, Sikaplan®	Sarnafil®, Sikaplan®
ADVANTAGES	■ Established technology with the longest track record ■ Availability of products for exposed roofing applications with high fire ratings / extended fire resistance ■ Easy to repair ■ Possibility of customized design solutions (colors, profiles, and roof graphics) ■ Homogeneous hot air welded joints ■ Easy to handle on site ■ Suitable for use and exposure in different climatic conditions ■ Fast installation independent of the weather ■ Good vapor permeability ■ Highly flexible ■ Flame free installation ■ Recyclable ■ Proven technology for more than 50 years	■ High chemical resistance ■ Suitability for direct application on such substrates, as old bitumen, EPS and XPS insulation (polystyrenes) ■ Availability of products for exposed roofing applications with high fire ratings / extended fire resistance ■ Plasticizer free (no migration / contamination or leaching) ■ Long life expectancy ■ Easy to repair ■ Homogeneous hot air welded joints ■ Easy to handle on site ■ Suitable for use and exposure in different climatic conditions ■ Fast installation independent of the weather ■ Outstanding ecological profile ■ Flame free installation ■ Recyclable ■ Proven track record since 1989

LIQUID APPLIED MEMBRANES

TYPE	WATER-BASED CET	1-C PU	1-C PU	2-C PU / PUA
	Co-elastic Technology (CET) 1 component Polyurethane modified acrylic	Moisture Triggered Chemistry (MTC) 1 component Polyurethane	SikaRoof® i-Cure systems with Sikalastic® liquid applied membranes	Polyurethane/Polyurea Hybrid 2 component Polyurethane/ Polyurea
BRAND NAMES	Sikalastic®-560	SikaRoof® MTC systems with Sikalastic® liquid membranes	Sikalastic®-641	Sikalastic®-851 R
ADVANTAGES	■ Solvent free and VOC compliant water-based coating ■ One-component – ready to use ■ Cold applied – requires no heat or flame ■ Seamless roof waterproofing membrane ■ UV resistant and resistant to yellowing and weathering ■ Highly elastic and crack bridging ■ Easily recoated when needed – no stripping required ■ Economical – provides a cost efficient life cycle extension for failing roofs ■ Good adhesion to most substrates ■ Vapor permeable – allows the substrate to breathe ■ 12-month shelf life	■ Fast curing – free from rain damage almost immediately on application ■ Proven technology – over 25 year track record ■ One component – ready to use ■ Cold applied – requires no heat or flame ■ Seamless roof waterproofing membrane ■ Compatible with Sika® Reemat Premium – easy to detail ■ Highly elastic and crack bridging – retains flexibility even at low temperatures ■ Easily recoated when needed – no stripping required ■ Good adhesion to most substrates ■ Vapor permeable – allows substrate to breathe ■ Strong resistance to common atmospheric chemicals	■ Minimal odor – suitable for odor sensitive projects ■ High solids ■ One component – ready to use ■ Cold applied – requires no heat or flame ■ Seamless roof waterproofing membrane ■ Compatible with Sika® Reemat Premium – easy to detail ■ Easily recoated when needed – no stripping required ■ Vapor permeable – allows substrate to breathe. ■ Highly elastic and crack bridging – retains flexibility even at low temperatures ■ Good adhesion to most substrates ■ Strong resistance to common atmospheric chemicals	■ Fast application – application with 2-part hot spray equipment ■ Fast curing – walkable on after 4 minutes ■ Solvent free ■ High solids ■ Seam less waterproofing membrane ■ Excellent crack bridging properties ■ Highly elastic and crack bridging ■ Low viscosity ■ Vapor permeable – allows the substrate to breath ■ Good adhesion to most substrates ■ 12-month shelf life

SINGLE PLY MEMBRANES – SIKA'S PRODUCTION AND MATERIAL COMPETENCE

PRODUCTION TECHNOLOGIES
Sika is one of the most experienced single ply membrane producers with track record of more than 50 years. Our production incorporates most efficient and proven technologies such as:

- **Calendering** – means to roll out with heat. Production line consists of several pairs of heated rollers that press the polymer compound into a sheet.
- **Extrusion** – a process by which a doughlike polymer compound is forced through a wideslot die by a slowly and continuously rotating screw, emerging as a continuous sheet.
- **Extrusion-coating** – a combination of extrusion and coating to a supporting layer

Sika introduced a special technology of lacquer coating for PVC membranes that seals the surface of the membrane to protect it from external influences. Lacquer prevents plasticizer migration and ensures the life expectancy of the roof.

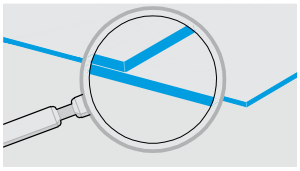
Sika has wide possibilities of membranes texturing for various purposes such as an embossed matte finish, which provides a safe nonslip surface.

Sika single ply PVC membranes are manufactured on extrusion and calendering production lines. This widest range of production possibilities opens unique flexibility and membrane choice to our clients – different colors and surfaces, thicknesses and sheet widths, reinforcements and laminated felts.

Sika is the only company which unites all these production technologies for PVC membranes "under one roof".

Sika single ply FPO membranes are manufactured on extrusion coating production line. This method was specially designed for FPO membranes production by Sika engineers and gathers positive sides of both processes. FPO membrane layers are extruded in semi-liquid state allowing better embedment of reinforcement. This unique technology allows us to provide clients with most advanced and technically developed FPO membranes.

HOMOGENEOUS MEMBRANES

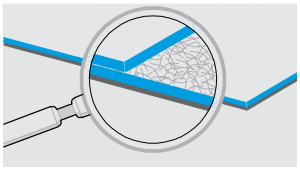


High flexibility and are ideal for executing details.
Sika product:
Sarnafil® T 66-15D
Sika-Trocal® S
Sikaplan® D

MEMBRANES WITH GLASS-FIBRE MAT INLAY

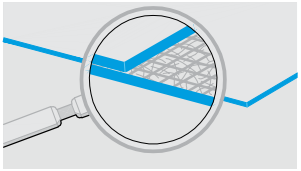
Dimensionally stable and undergo negligible shrinkage.
Sika product:
Sarnafil® TG 66 / G 410 / G 476
Sikaplan® SGmA / TB

MEMBRANES WITH GLASS MAT INLAY AND FELT BACKING



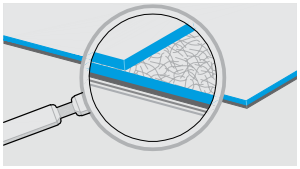
Felt as a leveling or separating layer, it provides keying for the adhesive bond. These are typically used in adhered systems or roofs where aesthetics is central.
Sika product:
Sarnafil® TG 76 Felt / G 410 Felt
Sikaplan® SGK

REINFORCED MEMBRANES WITH FULLY EMBEDDED FABRIC OR A SCRIM



Reinforcement provides high tensile strength.
The embedded reinforcing transfers wind forces to the mechanical fasteners anchored to the roof deck.
Sika product:
Sarnafil® S 327 / TS 77 (with additional glass matt)
Sikaplan® G / VG / VGWT / TM

MEMBRANES WITH GLASS MAT INLAY, FELT BACKING AND SELF ADHESIVE LAYER



Felt as a leveling or separating layer with an adhesive layer, which enables the membrane to be fully bonded directly to the substrates. These are typically used for fast application and in adhered systems where aesthetics is a must.
Sika product:
Sarnafil® G 410 FSA, G 410 SA (no Felt) / TG 76 FSA
Sikaplan® RV-s (no Felt)

LIQUID APPLIED MEMBRANES – SIKA'S PRODUCTION AND MATERIAL COMPETENCE

SINCE 1910 Sika has been widely known for top quality solutions in waterproofing and polyurethanes are clearly one of the main products here.

GENERAL DESCRIPTION

Polyurethane is a base material technology for liquid membranes and at the same time it is a key competence of Sika for many years. Developments and know-how, modern production facilities, wide product range and extensive experience allows Sika to be a solid world market leader for polyurethanes in variety of application fields like:

- Sealing and bonding in industry
- Liquid membranes in roofing and other applications
- Flooring
- Sealing and bonding in construction

Liquid applied membranes are a main focus of Sika. Huge innovation work allowed Sika to develop and customize products specially for roofs and resulted in brand new advanced technologies such as SikaRoof® MTC.

These systems are unique on the market and bring our clients new level of reliability and security, workability and longevity. Beside liquid applied membranes assortment of reinforcements, primers and carrier layers, installation tools were created, which gives our clients not only the liquid membrane itself, but the whole system with components fully compatible to each other.

PRODUCTION

Sika's polyurethane coatings are produced using automated plants with electronically measured and dosed raw materials in stainless steel dissolving mixers. Each production unit has a powerful motor, its own heating and cooling system and an automatic discharging and cleaning system. Products are then packaged in steel drums.

NEW GENERATION OF 1-C PU MEMBRANES

The unique – Sika MTC technology was developed using Sika's own custom prepolymers and gives liquid polyurethane moisture triggered curing. It means no CO_2 outgassing in contact with water while curing and as a result far greater tolerance to moisture than standard PU's: the freshly applied membrane is rain resistant 10 minutes after application.

Sikalastic®-641 is the next generation of Sikalastic® liquid applied membranes with reduced VOC content for lower odor development during as well as after the curing process. Sikalastic®-641 is a unique product, using Sika patented i-Cure hardener technology, which has been developed specifically for use in highly sensitive site areas, such as hospitals, schools, food and pharma industry, etc.

SOLUTIONS FOR EXPOSED ROOFS

ROOF STRUCTURES WITHOUT BALLAST or covering layers on the waterproofing membrane are known as “Exposed Roofs”.

GENERAL DESCRIPTION

They are ideal for lightweight roof structures with large spans as well as for complex roof structures and geometries, including domes for example:

- Light weight roof build-ups
- Possibility of light / bright colored surfaces for sun and heat reflection, reducing the “heat island” effect
- Almost unlimited design possibilities with membrane colors, profiles and roof graphics, etc.

Sika has a wide range of exposed roof systems, all of them designed to provide high performance, long lasting and sustainable roof waterproofing. They easily withstand all common environmental influences:

- UV light exposure
- Heat and cold
- Air born pollution and dust
- Wind uplift forces
- Rain, hail, snow and all other common exposures

MECHANICALLY FASTENED SYSTEMS WITH Sarnafil® / Sikaplan®

- Mechanically fastened roofs are the most cost efficient for exposed roofing applications.
- The fastest installation speed is achieved with mechanical fastening
- The Sarnafil® / Sikaplan® membranes for mechanical fastening have special polyester reinforcement, enabling high wind load resistance
- Installation is almost not weather dependent

Mechanically fastened systems are ideal for large, lightweight metal decked structures and buildings, such as distribution and logistics centres, warehouses, supermarkets, workshops.

ADHERED SYSTEMS WITH Sarnafil® / Sikaplan®

Sarnafil® / Sikaplan® adhered systems are a great solution if there is a need for:

- High aesthetic appearance
- Freedom of design and suitability for complex roof shapes
- No penetration of the roof deck are required

These adhered systems also have additional advantages in many situations such as:

- Very low noise emissions during installation
- Easy refurbishment of existing bitumen roofs

Sika adhered systems are generally installed on public and residential buildings, including schools, offices, hotels, hospitals, apartments, sports centres etc, plus all types of refurbishment projects.

LIQUID APPLIED MEMBRANE SYSTEMS WITH Sikalastic®

Sikalastic® liquid applied systems provide many advantages:

- Cold applied – no flame, no heat
- Seamless roof waterproofing membrane
- Fully bonded to the substrate
- In white, highly reflective and ideal for cool and solar roofs
- Easily recoated when needed – no stripping required
- Highly elastic and crack bridging – retains flexibility even at low temperatures
- Wide range of color selection
- UV stable and resistant to yellowing
- Ideal for refurbishment – provides a cost efficient life cycle extension for failing roofs
- No penetration of the roof deck
- Easy and fast installation even on complicated details
- Vapor permeable – allows the substrate to breathe

These systems are ideal for exposed roofs with a lot of complicated detailing and penetrations.

MECHANICALLY FASTENED SYSTEMS ON STEEL DECK

SYSTEMS WITH PIR/MINERAL WOOL THERMAL INSULATION

REQUIREMENTS
- Fast and easy installation
- Special colors and design (décor profiles)
- High fire resistance of the thermal insulation

SIKA SOLUTION
PVC-membrane with lacquered surface and extended guarantee

SIKA SYSTEM
- PVC membrane Sarnafil® S 327 mechanically fixed with Sarnafast® SF 4.8 mm and Sarnafast® Washer KT
- Mineral wool or PIR insulation
- Vapor control layer Sarnavap® 500 E or 1000 E
- Steel deck

REQUIREMENTS
- Fast and easy installation
- High chemical resistance of the waterproofing membrane
- High fire resistance of the thermal insulation

SIKA SOLUTION
FPO membrane with extended guarantee

SIKA SYSTEM
- FPO membrane Sarnafil® TS 77 mechanically fixed with Sarnafast® SF 4.8 mm and Sarnafast® Washer KT
- Mineral wool or PIR insulation
- Vapor control layer Sarnavap® 1000 E, 2000 E or 4000 E SA
- Steel deck

REQUIREMENTS
- Fast and easy installation
- Standard guarantee
- High fire resistance of the thermal insulation
- Optional: slip resistant surface

SIKA SOLUTION
Standard PVC membrane
Optional: increased fire and cold resistance

SIKA SYSTEM
- PVC membrane Sikaplan® G mechanically fixed with Sarnafast® SF 4.8 mm and Sarnafast® Washer KT
- Mineral wool or PIR insulation
- Vapor control layer Sarnavap® 500 E or 1000 E
- Steel deck

REQUIREMENTS
- Fast and easy installation
- Standard guarantee
- High fire resistance of the thermal insulation

SIKA SOLUTION
Standard FPO membrane

SIKA SYSTEM
- FPO membrane Sikaplan® TM mechanically fixed with Sarnafast® SF 4.8 mm and Sarnafast® Washer KT
- Mineral wool or PIR insulation
- Vapor control layer Sarnavap® 1000 E, 2000 E or 4000 E SA
- Steel deck

SYSTEMS WITH EPS/XPS THERMAL INSULATION

REQUIREMENTS
- Fast and easy installation
- Special colors and design (décor profiles)
- Increased compressive strength of the thermal insulation

SIKA SOLUTION

PVC-membrane with lacquered surface and extended guarantee

SIKA SYSTEM
- PVC membrane Sarnafil® S 327 mechanically fixed with Sarnafast® SF 4.8 mm and Sarnafast® Washer KT
- Separation layer S-Glass Fleece 120
- XPS or EPS insulation
- Vapor control layer Sarnavap® 500 E or 1000 E
- Steel deck

REQUIREMENTS
- Fast and easy installation
- High chemical resistance of the waterproofing membrane
- Increased compressive strength of the thermal insulation

SIKA SOLUTION

FPO membrane with extended guarantee

SIKA SYSTEM
- FPO membrane Sarnafil® TS 77 mechanically fixed with Sarnafast® SF 4.8 mm and Sarnafast® Washer KT
- Separation layer S-Glass Fleece 120 if required by fire regulations
- XPS or EPS insulation
- Vapor control layer Sarnavap® 1000 E, 2000 E or 4000 E SA
- Steel deck

REQUIREMENTS
- Fast and easy installation
- Standard guarantee
- High fire resistance of the thermal insulation
- Optional: slip resistant surface

SIKA SOLUTION

Standard PVC membrane
Optional: increased fire and cold resistance

SIKA SYSTEM
- PVC membrane Sikaplan® G mechanically fixed with Sarnafast® SF 4.8 mm and Sarnafast® Washer KT
- Mineral wool or PIR insulation
- Vapor control layer Sarnavap® 500 E or 1000 E
- Steel deck

REQUIREMENTS
- Fast and easy installation
- Standard guarantee
- High fire resistance of the thermal insulation

SIKA SOLUTION

Standard FPO membrane

SIKA SYSTEM
- FPO membrane Sikaplan® TM mechanically fixed with Sarnafast® SF 4.8 mm and Sarnafast® Washer KT
- Mineral wool or PIR insulation
- Vapor control layer Sarnavap® 1000 E, 2000 E or 4000 E SA
- Steel deck

MECHANICALLY FASTENED SYSTEMS ON CONCRETE DECK

SYSTEMS WITH PIR/MINERAL WOOL THERMAL INSULATION

REQUIREMENTS
- Fast and easy installation
- Special colors and design (décor profiles)
- High fire resistance of the thermal insulation

SIKA SOLUTION
PVC-membrane with lacquered surface and extended guarantee

SIKA SYSTEM
- PVC membrane Sarnafil® S 327 mechanically fixed with Sarnafast® SBF 6.0 mm and Sarnafast® Washer KTL
- Mineral wool or PIR insulation
- Vapor control layer Sarnavap® 5000 E SA
- Concrete deck

REQUIREMENTS
- Fast and easy installation
- High chemical resistance of the waterproofing membrane
- High fire resistance of the thermal insulation

SIKA SOLUTION
FPO membrane with extended guarantee

SIKA SYSTEM
- FPO membrane Sarnafil® TS 77 mechanically fixed with Sarnafast® SBF 6.0 mm and Sarnafast® Washer KTL
- Mineral wool or PIR insulation
- Vapor control layer Sarnavap® 5000 E SA
- Concrete deck

REQUIREMENTS
- Fast and easy installation
- Standard guarantee
- High fire resistance of the thermal insulation
- Optional: slip resistant surface

SIKA SOLUTION
Standard PVC membrane
Optional: increased fire and cold resistance

SIKA SYSTEM
- PVC membrane Sikaplan® G mechanically fixed with Sarnafast® SBF 6.0 mm and Sarnafast® Washer KTL
- Mineral wool or PIR insulation
- Vapor control layer Sarnavap® 5000 E SA
- Concrete deck

REQUIREMENTS
- Fast and easy installation
- Standard guarantee
- High fire resistance of the thermal insulation

SIKA SOLUTION
Standard FPO membrane

SIKA SYSTEM
- FPO membrane Sikaplan® TM mechanically fixed with Sarnafast® SBF 6.0 mm and Sarnafast® Washer KTL
- Mineral wool or PIR insulation
- Vapor control layer Sarnavap® 5000 E SA
- Concrete deck

SYSTEMS WITH EPS/XPS THERMAL INSULATION

REQUIREMENTS
- Fast and easy installation
- Special colors and design (décor profiles)
- Increased compressive strength of the thermal insulation

SIKA SOLUTION
PVC-membrane with lacquered surface and extended guarantee

SIKA SYSTEM
- PVC membrane Sarnafil® S 327 mechanically fixed with Sarnafast® SBF 6.0 mm and Sarnafast® Washer KTL
- Separation layer S-Glass Fleece 120
- XPS or EPS insulation
- Vapor control layer Sarnavap® 5000 E SA
- Concrete deck

REQUIREMENTS
- Fast and easy installation
- High chemical resistance of the waterproofing membrane
- Increased compressive strength of the thermal insulation

SIKA SOLUTION
FPO membrane with extended guarantee

SIKA SYSTEM
- FPO membrane Sarnafil® TS 77 mechanically fixed with Sarnafast® SBF 6.0 mm and Sarnafast® Washer KTL
- Separation layer S-Glass Fleece 120 if required by fire regulations
- XPS or EPS insulation
- Vapor control layer Sarnavap® 5000 E SA
- Concrete deck

REQUIREMENTS
- Fast and easy installation
- Standard guarantee
- High fire resistance of the thermal insulation
- Optional: slip resistant surface

SIKA SOLUTION
Standard PVC membrane
Optional: increased fire and cold resistance

SIKA SYSTEM
- PVC membrane Sikaplan® G mechanically fixed with Sarnafast® SBF 6.0 mm and Sarnafast® Washer KTL
- Mineral wool or PIR insulation
- Vapor control layer Sarnavap® 5000 E SA
- Concrete deck

REQUIREMENTS
- Fast and easy installation
- Standard guarantee
- High fire resistance of the thermal insulation

SIKA SOLUTION
Standard FPO membrane

SIKA SYSTEM
- FPO membrane Sikaplan® TM mechanically fixed with Sarnafast® SBF 6.0 mm and Sarnafast® Washer KTL
- Mineral wool or PIR insulation
- Vapor control layer Sarnavap® 5000 E SA
- Concrete deck

ADHERED SYSTEMS ON VARIOUS SUBSTRATES

FULLY ADHERED SYSTEMS WITH SINGLE PLY MEMBRANES

REQUIREMENTS
- Highest aesthetic appearance
- No penetration of the roof deck (when all roof build-up components are adhered)
- Special colors and design (décor profiles)

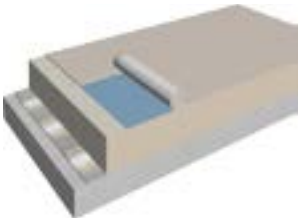
SIKA SOLUTION
Fully adhered lacquered felt-backed PVC membrane with extended guarantee

SIKA SYSTEM
- PVC membrane Sarnafil® G 410 EL Felt fully adhered to the insulation with Sarnacol® 2142 S
- PIR, EPS/XPS insulation bonded to the vapor control layer with Sarnacol® 2162 or mechanically fastened to the substrate
- Self adhesive vapor control layer Sarnavap® 5000 E SA or bitumen
- Primer 600 or Primer 610 Spray, where required
- Concrete (or timber / steel) deck

REQUIREMENTS
- High aesthetic appearance
- Instant adhesion, convenient for application on steep roof slopes
- No penetration of the roof deck (when all roof build-up components are adhered)
- Special colors and design (décor profiles)

SIKA SOLUTION
Fully adhered lacquered PVC membrane with extended guarantee

SIKA SYSTEM
- PVC membrane Sarnafil® G 410 EL fully adhered to the insulation with Sarnacol® 2170 or Sarnacol® 2172 Spray
- PIR insulation bonded to the vapor control layer with Sarnacol® 2162 or mechanically fastened to the substrate
- Self adhesive vapor control layer Sarnavap® 5000 E SA or bitumen
- Primer 600 or Primer 610 Spray, where required
- Concrete (or timber / steel) deck



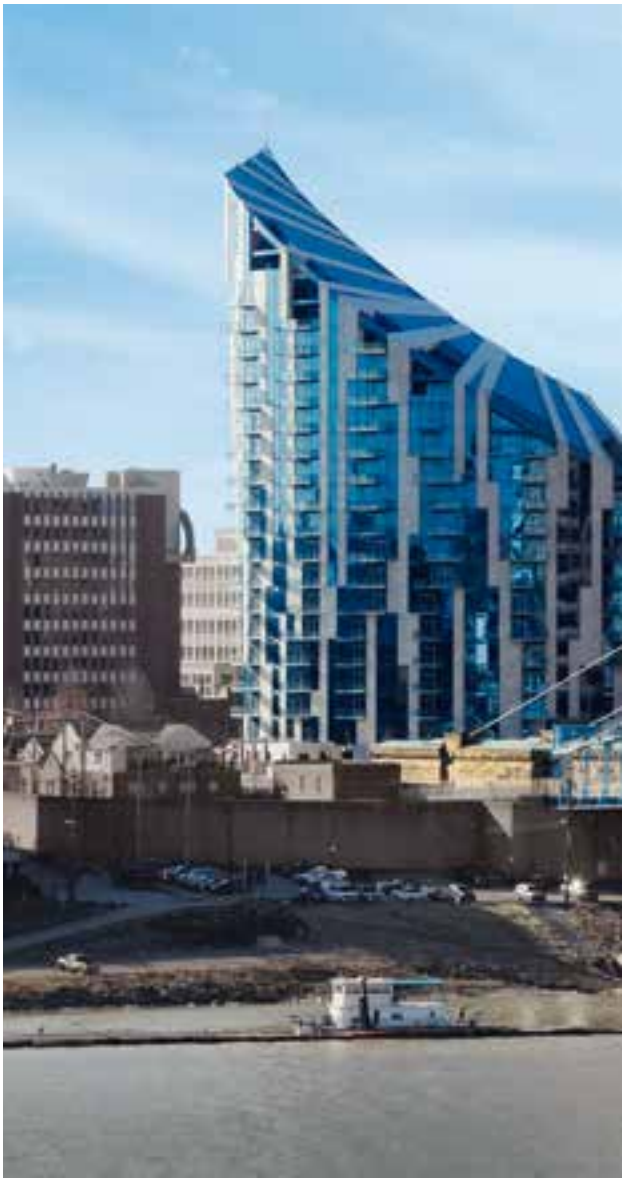
REQUIREMENTS
- High aesthetic appearance
- High chemical resistance of the waterproofing membrane
- No penetration of the roof deck (when all roof build-up components are adhered)
- Special colors and design (décor profiles)
- Extended guarantee (from your local Sika organization)

SIKA SOLUTION
Fully adhered felt-backed FPO membrane with extended guarantee

SIKA SYSTEM
- FPO membrane Sarnafil® TG 76 Felt fully adhered to the insulation with Sarnacol® 2142 S
- PIR, EPS/XPS insulation bonded to the vapor control layer with Sarnacol® 2162 or mechanically fastened to the substrate
- Self adhesive vapor control layer Sarnavap® 5000 E SA or bitumen
- Primer 600 or Primer 610 Spray, where required
- Concrete (or timber / steel) deck

ADHERED SYSTEMS ON VARIOUS SUBSTRATES

PARTLY ADHERED SYSTEMS WITH SINGLE PLY MEMBRANES



REQUIREMENTS

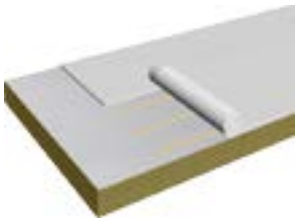
- Fast installation
- No penetration of the roof deck
- Standard guarantee (from your local Sika organization)

SIKA SOLUTION

Partly adhered standard felt-backed PVC membrane

SIKA SYSTEM

- PVC membrane Sikaplan® SGK partially adhered to the insulation with Sika-Trocal® C 300
- PIR, EPS/XPS insulation bonded to the vapor control layer with Sarnacol® 2162 or mechanically fastened to the substrate
- Self adhesive vapor control layer Sarnavap® 5000 E SA or bitumen
- Primer 600 or Primer 610 Spray, where required
- Steel (or timber / concrete) deck



REQUIREMENTS

- No penetration of the roof deck
- Standard guarantee (from your local Sika organization)

SIKA SOLUTION

Partly adhered standard felt-backed PVC membrane on composite panel

SIKA SYSTEM

- PVC membrane Sikaplan® SGK partially adhered to pre-fabricated panels with Sika-Trocal® C 300
- Composite or sandwich panels

SELF-ADHERED SYSTEMS WITH SINGLE PLY MEMBRANES

REQUIREMENTS
- Easy and fast installation
- Instant adhesion
- No penetration of the roof deck
- Standard guarantee (from your local organization

SIKA SOLUTION / SYSTEM 1
Self adhered PVC membrane

SIKA SYSTEM
- Self adhered PVC membrane Sarnafil® G 410 SA
- PIR insulation board bonded to vapor control layer with Sarnacol® 2162
- Self adhesive vapor control layer Sarnavap® 5000 E SA
- Primer 600 or Primer 610 Spray, where required
- Concrete (or timber / steel) deck

REQUIREMENTS
- Easy and fast installation
- Instant adhesion
- No penetration of the roof deck
- Standard guarantee (from your local organization

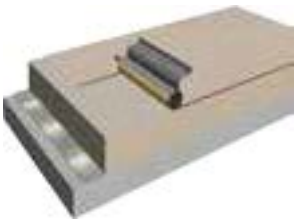
SIKA SOLUTION / SYSTEM 2
Self adhered PVC membrane

SIKA SYSTEM
- Self adhered PVC membrane Sarnafil® G 410 SA
- PIR insulation board bonded to vapor control layer with Sarnacol® 2162
- Self adhesive vapor control layer Sarnavap® 5000 E SA
- Primer 600 or Primer 610 Spray, where required
- Steel (or timber / concrete) deck

REQUIREMENTS
- Easy and fast installation
- Instant adhesion, convenient for application on steep roof slopes
- No penetration of the roof deck
- Standard guarantee (from your local Sika organization)

SIKA SOLUTION / SYSTEM 3
Self adhered PVC membrane

SIKA SYSTEM
- Self-adhered PVC membrane Sikaplan® RV-s
- PIR insulation bonded to vapor control layer with Sarnacol® 2162
- Self adhesive vapor control layer Sarnavap® 5000 E SA or bitumen
- Primer 600 or Primer 610 Spray, where required
- Concrete (or timber / steel) deck



REQUIREMENTS
- Easy and fast installation
- Instant adhesion, convenient for application on steep roof slopes
- No penetration of the roof deck
- Standard guarantee (from your local Sika organization)

SIKA SOLUTION
Self adhered FPO membrane

SIKA SYSTEM
- Self-adhered FPO membrane Sarnafil® TG 76 FSA
- Primer 600 / Primer 780 where required
- PIR/EPS/MV (Bondrock MV) insulation bonded to vapor control layer with Sarnacol® 2162
- Self adhesive vapor control layer Sarnavap® 5000E SA or bitumen
- Primer 600 or Primer 610 Spray, where required
- Concrete (or timber / steel) deck

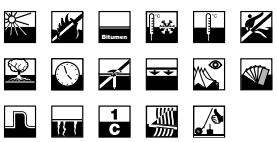
LIQUID APPLIED SYSTEMS

SYSTEMS WITHOUT THERMAL INSULATION

REQUIREMENTS
- Seamless waterproofing
- Fast curing
- No penetration of the roof deck
- Extended guarantee (from your local Sika organization)
- Increased fire resistance
- No water underflow

SIKA SOLUTION
Cold roof waterproofing with SikaRoof® MTC Systems

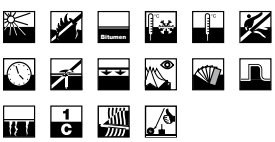
SIKA SYSTEM
SikaRoof® MTC 12/15/18/22
- 1 or 2 top coats of Sikalastic®-621 TC
- Reinforcement with Sikalastic® Reemat
- Base coat Sikalastic®-601 BC
- Sika® Concrete Primer
- Concrete deck



REQUIREMENTS
- Seamless waterproofing
- Low odor
- No penetration of the roof deck
- Extended guarantee (from your local Sika organization)
- Increased fire resistance
- No water underflow

SIKA SOLUTION
Cold roof waterproofing with SikaRoof® i-Cure Systems

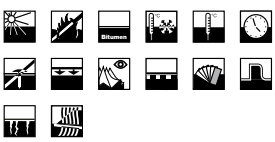
SIKA SYSTEM
Sikalastic®-641 Systems
- 1 or 2 top coats of Sikalastic®-641 TC
- Reinforcement with Sikalastic® Reemat
- Base coat Sikalastic®-641 BC
- Sika® Concrete Primer
Concrete deck



REQUIREMENTS
- Seamless waterproofing
- Fast application
- No penetration of the roof deck
- Extended guarantee (from your local Sika organization)
- No water underflow

SIKA SOLUTION
Cold roof waterproofing with Sikalastic®-851 R

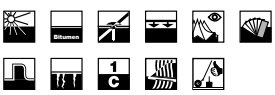
SIKA SYSTEM
Sikalastic®-851 R System
- 1 top coat of Sikalastic®-445 or Sikalastic®-621 TC
- Base coat Sikalastic®-851 R
- Sikafloor®-156/161 or Sika Concrete Primer
- Concrete deck



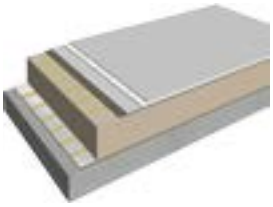
REQUIREMENTS
- Seamless waterproofing
- Low odor
- Solvent free
- No penetration of the roof deck
- No water underflow

SIKA SOLUTION
Cold roof waterproofing with Sikalastic®-560 Systems

SIKA SYSTEM
Sikalastic®-560 Systems
- 1 – 3 top coats of Sikalastic®-560
- Reinforcement with Sikalastic® Fleece-120
- Base coat Sikalastic®-560
- Sikalastic®-560 diluted with 10% water
- Concrete deck



SYSTEMS WITH THERMAL INSULATION



REQUIREMENTS

- Additional thermal insulation
- Seamless waterproofing
- No penetration of the roof deck
- Extended guarantee (from your local Sika organization)
- No water underflow

SIKA SOLUTION

Warm roof build-up roofing system with Sikalastic® liquid applied membranes

SIKA SYSTEM

- Waterproofing system: SikaRoof® MTC, Sikalastic®-641, Sikalastic®-851 R or Sikalastic®-560
- Carrier layer Sikalastic® Carrier bonded with Sarnacol® 2162
- PIR or EPS insulation bonded with Sarnacol® 2162
- Vapor control layer Sarnavap® 5000 SA
- Concrete (or timber / steel) deck

SOLUTIONS FOR GRAVEL BALLASTED ROOFS

IN GRAVEL BALLASTED ROOFING SYSTEMS, the waterproofing membrane is covered and ballasted against wind uplift and other exposures with a layer of gravel. Conventional gravel ballasted roofs have been established in most markets for many years and are suitable on most flat roofs and bearing structures.

GENERAL DESCRIPTION

Sika has a proven track record of over 30 years supplying this type of system. With the Sikaplan® / Sarnafil® and Sikalastic® product ranges, Sika can provide both single ply and liquid applied membranes for these roofs according to the client's specific requirements.

Gravel ballasted roofs have many benefits and frequently make a very economic roofing system with:

- Fast and easy installation
- No penetration of the roof deck

Thanks to the simple buildup of a gravel ballasted roof, the system also has many advantages during the whole service life.

- Easy to maintain, low maintenance costs
- Protection of the waterproofing membrane against environmental exposure and mechanical damage
- The noncombustible properties of the gravel contribute significantly to the fire resistance of the whole roof. The gravel also prevents flames from spreading across the surface of the roof.

LOOSE LAID MEMBRANE SYSTEMS WITH Sikaplan® / Sarnafil®

Several Sikaplan® and Sarnafil® single ply membranes are specially designed for use on gravel ballasted roofs where they provide durable, long lasting performance.

- Resistant against biological micro-organisms
- Application is even possible at minus temperatures, giving unique flexibility to contractors, their clients and specifiers

Gravel ballasted roofs with Sikaplan® or Sarnafil® single ply membranes are conventionally installed.

- The single ply membrane and other roof components, including the thermal insulation, are loose laid
- The buildup is ballasted with a gravel layer of at least 50 mm and 80 kg/m²
- The gravel ballast secures the roof waterproofing against wind uplift forces

SIKA HAS A PROVEN TRACK RECORD OF OVER 30 YEARS SUPPLYING THIS TYPE OF SYSTEMS.

LOOSE LAID SYSTEMS

WARM ROOFS WITH SINGLE PLY MEMBRANES

REQUIREMENTS
- Fast and easy installation
- Extended guarantee (from your local Sika organization)
- High fire resistance

SIKA SOLUTION
PVC-membrane with extended guarantee on PIR

SIKA SYSTEM
- Gravel min. 50 mm and 80 kg/m²
- Protection layer S-Felt T 300 or S-Felt GK 400
- PVC membrane Sarnafil® G 410 / G 476
- PIR insulation
- Vapor control layer Sarnavap® 3000 M
- Concrete deck

REQUIREMENTS
- Fast and easy installation
- High fire resistance
- Increased compressive strength of the thermal insulation

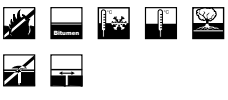
SIKA SOLUTION
PVC-membrane with extended guarantee on EPS/XPS

SIKA SYSTEM
- Gravel min. 50 mm and 80 kg/m²
- Protection layer S-Felt T 300 or S-Felt GK 400
- PVC membrane Sarnafil® G 410 / G 476
- Separation layer S-Glass Fleece 120
- XPS/EPS insulation
- Vapor control layer Sarnavap® 3000 M
- Concrete deck

REQUIREMENTS
- Fast and easy installation
- High chemical resistance of the waterproofing membrane
- Extended guarantee (from your local Sika organization)
- High fire resistance

SIKA SOLUTION
FPO-membrane with extended guarantee on PIR/EPS/XPS

SIKA SYSTEM
- Gravel min. 50 mm and 80 kg/m²
- Protection layer S-Felt T 300 or S-Felt GK 400
- FPO membrane Sarnafil® TG 66
- PIR/EPS/XPS
- Vapor control layer Sarnavap® 3000 M
- Concrete deck



REQUIREMENTS
- Fast and easy installation
- High chemical resistance of the waterproofing membrane
- High fire resistance

SIKA SOLUTION
Standard FPO-membrane

SIKA SYSTEM
- Gravel min. 50 mm and 80 kg/m²
- Protection layer S-Felt T 300 or S-Felt GK 400
- FPO membrane Sikaplan® TB
- PIR/EPS/XPS
- Vapor control layer Sarnavap® 5000 E SA
- Concrete deck

WARM ROOFS WITH SINGLE PLY MEMBRANES

REQUIREMENTS
- Fast and easy installation
- Standard guarantee (from your local Sika organization)
- High fire resistance

SIKA SOLUTION
Standard PVC membrane on PIR

SIKA SYSTEM
- Gravel min. 50 mm and 80 kg/m²
- Protection layer S-Felt T 300 or S-Felt GK 400, where required
- PVC membrane Sikaplan® SGmA
- PIR insulation
- Vapor control layer Sarnavap® 3000 M
- Concrete deck

REQUIREMENTS
- Fast and easy installation
- Standard guarantee (from your local Sika organization)
- Increased compressive strength of the thermal insulation
- High fire resistance

SIKA SOLUTION
Standard PVC membrane on EPS/XPS

SIKA SYSTEM
- Gravel min. 50 mm and 80 kg/m²
- Protection layer S-Felt T 300 or S-Felt GK 400, where required
- PVC membrane Sikaplan® SGmA
- Separation layer S-Glass Fleece 120
- XPS/EPS insulation
- Vapor control layer Sarnavap® 3000 M
- Concrete deck

LOOSE LAID SYSTEMS

INVERTED SYSTEMS WITH SINGLE PLY MEMBRANES

REQUIREMENTS

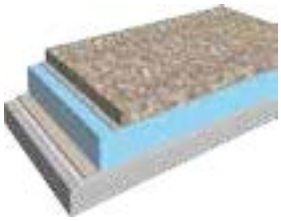
- Fast and easy installation
- Increased compressive strength for the thermal insulation
- Inverted roof build-up
- Additional protection of the waterproofing membrane
- High fire resistance

SIKA SOLUTION

PVC-membrane with extended guarantee

SIKA SYSTEM

- Gravel min. 50 mm and 80 kg/m²
- Filter layer S-Felt VS 140
- XPS insulation
- Separation layer S-Glass Fleece 120
- PVC membrane Sarnafil® G 410 / G 476
- Protection layer S-Felt A 300
- Concrete deck



REQUIREMENTS

- Fast and easy installation
- High chemical resistance of the waterproofing membrane
- Inverted roof build-up
- Additional protection of the waterproofing membrane
- High fire resistance

SIKA SOLUTION

FPO-membrane with extended guarantee

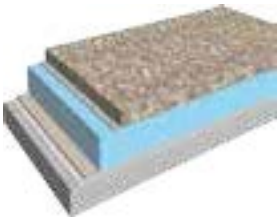
SIKA SYSTEM

- Gravel min. 50 mm and 80 kg/m²
- Filter layer S-Felt VS 140
- XPS insulation
- FPO membrane Sarnafil® TG 66
- Protection layer S-Felt A 300
- Concrete deck

REQUIREMENTS
- Fast and easy installation
- Standard guarantee (from your local Sika organization)
- Increased compressive strength for the thermal insulation
- Inverted roof build-up
- High fire resistance
- Additional protection of the waterproofing membrane

SIKA SOLUTION
Standard PVC membrane

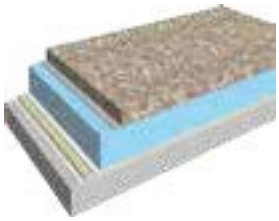
SIKA SYSTEM
- Gravel min. 50 mm and 80 kg/m²
- Filter layer S-Felt VS 140
- XPS insulation
- Separation layer S-Glass Fleece 120
- PVC membrane Sikaplan® SGmA
- Protection layer S-Felt A 300
- Concrete deck



REQUIREMENTS
- Fast and easy installation
- High chemical resistance of the waterproofing membrane
- Inverted roof build-up
- Additional protection of the waterproofing membrane
- High fire resistance

SIKA SOLUTION
Standard FPO-membrane

SIKA SYSTEM
- Gravel min. 50 mm and 80 kg/m²
- Filter layer S-Felt VS 140
- XPS insulation
- FPO membrane Sikaplan® TB
- Protection layer S-Felt A 300
- Concrete deck



REQUIREMENTS
- Fast and easy installation
- Fully bonded no lateral water migration
- Increased compressive strength for the thermal insulation
- Inverted roof build-up
- Additional protection of the waterproofing membrane
- High fire resistance

SIKA SOLUTION
PVC-membrane with extended guarantee

SIKA SYSTEM
- Gravel min. 50 mm and 80 kg/m²
- Filter layer S-Felt VS 140
- XPS insulation
- Separation layer S-Glass Fleece 120
- PVC membrane Sarnafil® G 410 / G 476
- Sarnacol® 2152
- Concrete deck

SOLUTIONS FOR GREEN ROOFS

IN SO CALLED 'GREEN ROOFS' soil, or a suitable plant growing medium, is built up and planted with selected vegetation over the waterproofing membrane. Green roofs can therefore make a significant contribution and present practical solutions in the quest for sustainability, increased biodiversity and quality of life.

GENERAL DESCRIPTION

They provide many environmental and economic benefits including:

- Reducing heat-island effect in cities
- Protecting and prolonging the life of the waterproofing membrane
- Enhancing the aesthetics of the building
- Improved thermal performance of the building
- A natural environment on the roof with natural CO_2 absorption

Green Roofs are classified as "**Extensive**" or "**Intensive**".

- **Extensive** green roofs have shallow growing medium with small plants
- **Intensive** green roofs have a thicker soil layer with additional drainage, for planting larger plants, bushes and small trees, thus creating roof gardens

In addition to the essential green roof waterproofing solutions, we have a wide range of supporting compatible and integrated accessories for green roof construction, including drainage and filter layers.

LOOSE LAID MEMBRANE SYSTEMS WITH Sikaplan® / Sarnafil®

Sika has a proven track record of over 30 years with green roof construction. All of the **Sikaplan®** and **Sarnafil®** waterproofing membranes used in these systems are:

- Resistant against biological and micro-organisms
- Fully resistant to root penetration

Efficient application is also a key advantage of these materials:

- These single ply membranes can be installed in most weather conditions, even at minus temperatures. This gives a unique flexibility to contractors, their clients and designers.
- Loose laying of the membranes provides fast waterproofing layer installation
- Soil with a minimum weight of 80 kg/m² provides the necessary wind uplift resistance, eliminating the need for any additional mechanical fastening

LIQUID APPLIED MEMBRANE SYSTEMS WITH Sikalastic®

The two component spray applied Sikalastic® are also ideally suited to green roof systems:

- These systems have full surface adhesion to the substrate, eliminating the risk of lateral water flow under the waterproofing system, so that any potential leaks from future damage can not spread along the roof surface and therefore they can easily be identified and re sealed.

- Fast machine application and curing with 2-component PU materials
- All Sika's liquid membranes used in green roof construction have excellent root and micro-organism resistance
- The products can be applied directly on to prepared concrete decks and so they are ideal for inverted roof build-ups

LOOSE LAID SYSTEMS

EXTENSIVE GREEN ROOFS WITH SINGLE PLY MEMBRANES

REQUIREMENTS
- Extensive green roof with low maintenance
- High chemical resistance of the waterproofing membrane

SIKA SOLUTION
FPO-membrane with extended guarantee

SIKA SYSTEM
- Soil with plants (5 – 15 cm thick and 50 – 170 kg/m²)
- Drainage layer Sarnavert® Aquadrain 550
- FPO membrane Sarnafil® TG 66
- PIR/EPS/XPS insulation
- Vapor control layer Sarnavap® 3000 M
- Concrete deck

REQUIREMENTS
- Extensive green roof with low maintenance

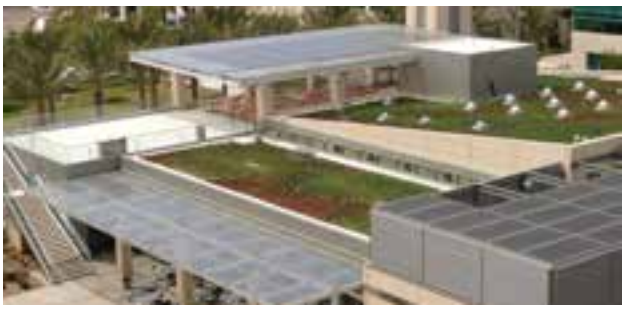
SIKA SOLUTION
PVC-membrane with extended guarantee

SIKA SYSTEM
- Soil with plants (5 – 15 cm thick and 50 – 170 kg/m²)
- Drainage layer Sarnavert® Aquadrain 550
- PVC membrane Sarnafil® G 476 / G 410
- Separation layer S-Glass Fleece 120
- PIR/EPS/XPS insulation
- Vapor control layer Sarnavap® 3000 M
- Concrete deck

REQUIREMENTS
- Extensive green roof with low maintenance
- Standard guarantee (from your local Sika organization)

SIKA SOLUTION
Standard PVC membrane

SIKA SYSTEM
- Soil with plants (5 – 15 cm thick and 50 – 170 kg/m²)
- Drainage layer Sarnavert® Aquadrain 550
- PVC membrane Sikaplan® SGmA
- Separation layer S-Glass Fleece 120
- PIR/PS/XPS insulation
- Vapor control layer Sarnavap® 3000 M
- Concrete deck



REQUIREMENTS
- Extensive green roof with low maintenance
- High chemical resistance of the waterproofing membrane

SIKA SOLUTION
Standard FPO-membrane

SIKA SYSTEM
- Soil with plants (5 – 15 cm thick and 50 – 170 kg/m²)
- Drainage layer Sarnavert® Aquadrain 550
- FPO membrane Sikaplan® TB
- PIR/EPS/XPS insulation
- Vapor control layer Sarnavap® 5000 E SA
- Concrete deck

REQUIREMENTS
- Extensive green roof with low maintance
- High resistance against lateral water migration
- Inverted roofing application

SIKA SOLUTION
PVC-membrane with extended guarantee

SIKA SYSTEM
- Soil with plants (5 – 15 cm thick and 50 – 170 kg/m²)
- Drainage layer Sarnavert® Aquadrain 550
- XPS insulation
- Separation layer S-Glass Fleece 120
- PVC membrane Sarnafil® G 410 / G 476
- Sarnacol® 2152
- Concrete deck

INTENSIVE GREEN ROOFS WITH SINGLE PLY MEMBRANES

REQUIREMENTS
- Roof garden (intensive green roof)
- High chemical resistance of the waterproofing membrane

SIKA SOLUTION
FPO-membrane with extended guarantee

SIKA SYSTEM
- Soil with plants (min. 15 cm thick and 170 kg/m²)
- Drainage Layer 25
- FPO membrane Sarnafil® TG 66
- PIR/EPS/XPS insulation
- Vapor control layer Sarnavap® 3000 M
- Concrete deck

REQUIREMENTS
- Roof garden (intensive green roof)

SIKA SOLUTION
PVC-membrane with extended guarantee

SIKA SYSTEM
- Soil with plants (min. 15 cm thick and 170 kg/m²)
- Drainage Layer 25
- PVC membrane Sarnafil® G 476 / G 410
- Separation layer S-Glass Fleece 120
- PIR/EPS/XPS insulation
- Vapor control layer Sarnavap® 3000 M
- Concrete deck

REQUIREMENTS
- Roof garden (intensive green roof)
- Standard guarantee (from your local Sika organization)

SIKA SOLUTION
Standard PVC membrane

SIKA SYSTEM
- Soil with plants (min. 15 cm thick and 170 kg/m²)
- Drainage Layer 25
- PVC membrane Sikaplan® SGmA
- Separation layer S-Glass Fleec
- PIR/EPS/XPS insulation
- Vapor control layer Sarnavap® 3000 M
- Concrete deck

REQUIREMENTS
- Roof garden (intensive green roof)
- High chemical resistance of the waterproofing membrane

SIKA SOLUTION
Standard FPO-membrane

SIKA SYSTEM
- Soil with plants (min. 15 cm thick and 170 kg/m²)
- Drainage Layer 25
- FPO membrane Sikaplan® TB
- PIR/EPS/XPS insulation
- Vapor control layer Sarnavap® 5000 E SA
- Concrete deck

REQUIREMENTS
- Extensive green roof with low maintance
- High resistance against lateral water migration
- Inverted roofing application

SIKA SOLUTION
PVC-membrane with extended guarantee

SIKA SYSTEM
- Soil with plants (min. 15 cm thick and 170 kg/m²)
- Drainage Layer 25
- XPS insulation
- Separation layer S-Glass Fleece 120
- PVC membrane Sarnafil® G 410 / G 476
- Sarnacol® 2152
- Concrete deck

LIQUID APPLIED SYSTEMS

GREEN ROOFS WITH LIQUID APPLIED MEMBRANES

REQUIREMENTS
- Extensive green roof
- Fast machine application
- Low maintenance
- Seamless waterproofing
- No water underflow

SIKA SOLUTION
Inverted build with 2-C PU

SIKA SYSTEM
- Soil with grass
- Drainage layer Sarnavert® Aquadrain 550
- XPS Insulation
- Coat of Sikalastic®-851 R
- Primer coat Sikafloor® 156/161 (or other as required)
- Concrete deck

REQUIREMENTS
- Intensive green roof
- Fast machine application
- Roof garden (intensive green roof)
- Seamless waterproofing
- No water underflow

SIKA SOLUTION
Inverted build with 2-C PU

SIKA SYSTEM
- Soil with plants
- Drainage Layer 30
- XPS insulation
- Coat of Sikalastic®-851 R
- Primer coat Sikafloor® 156/161 (or other as required)
- Concrete deck

SOLUTIONS FOR UTILITY ROOFS

ON UTILITY ROOF DECKS the top layer is designed as a wearing surface for pedestrian and / or vehicular traffic.

GENERAL DESCRIPTION

Utility roof decks can help to:

- Create more utilized space and bring additional value to the building
- Generate an increased return on investment by using the roof for a car park, restaurant area or any other viable purpose or facility

Utility roof decks share many features with gravel and green roof ballasted systems:

- The membrane is protected against any aggressive environmental exposure and mechanical damage
- The natural non-combustible properties of the paved wearing surface contribute significantly to the fire resistance of the whole roof

As Sika is not only a roofing materials supplier, but a major global construction chemical producer, we are also able to bring professional solutions for car park decks and many other special applications from one of our core business activities – Industrial and Commercial Flooring.

LOOSE LAID MEMBRANE SYSTEMS WITH Sikaplan® / Sarnafil®

- The single ply membranes are loose laid on the substrate, welded together and then ballasted with the required utility deck build-up and wearing surface.
- These systems have a proven track record of over 30 years
- **Sikaplan®** / **Sarnafil®** membranes for utility roof decks easily resist biological influences and microorganisms
- These flexible membranes can be installed in most weather conditions, even at minus temperatures
- No additional fastening and no penetration of the roof deck is needed

LIQUID APPLIED MEMBRANE SYSTEMS WITH Sikalastic®

Utility roof decks can also be waterproofed easily and securely with liquid applied membranes. **Sikalastic®** systems provide a unique range of solutions for utility roof deck waterproofing:

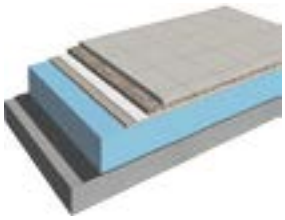
- **Sikalastic®** top deck wearing surface layers with added quartz sand and / or colored chips can give almost unlimited design possibilities for pedestrian terraces.
- Specific 2 component **Sikalastic®** products can be directly overlaid with hot poured asphalt, which can be a common solution for vehicular traffic access or car parking areas

All the main advantages of liquid applied membranes are also valid for utility roof decks:

- Cold applied waterproofing – no flame and no heat
- Seamless waterproofing, fully bonded to the substrate – preventing lateral water underflow
- The **SikaRoof® MTC** waterproofing layer is moisture and rain resistant just 10 minutes after application
- 1C products with a viscosity that is ideal for roofing applications (no need for additional thinners or hardeners)
- Easy installation with brushes and rollers even over complicated surface shapes and detailing
- High tensile strength and crack bridging elasticity
- Long shelf life products

LOOSE LAID SYSTEMS WITH SINGLE PLY MEMBRANES

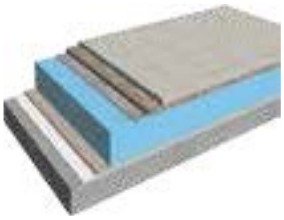
PEDESTRIAN TRAFFIC ROOFS



REQUIREMENTS
- Pedestrian terrace
- Highly chemically resistant waterproofing membrane

SIKA SOLUTION
Standard FPO membrane

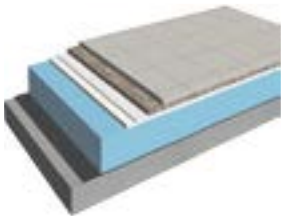
SIKA SYSTEM
- Pavers on chipping bed min. 30 mm
- Protection layer Sarnafil® TG 63 or S-Felt T 300
- FPO membrane Sikaplan® TB
- XPS/EPS or PIR insulation
- Vapor control layer Sarnavap® 5000 E SA
- Concrete deck



REQUIREMENTS
- Pedestrian terrace
- Highly chemically resistant waterproofing membrane
- Inverted roof build-up
- Additional protection of the membrane

SIKA SOLUTION
Standard FPO membrane

SIKA SYSTEM
- Pavers on chipping bed min. 30 mm
- Filter layer S-Felt VS 140
- XPS insulation
- FPO membrane Sikaplan® TB
- Protection layer S-Felt A 300
- Concrete deck



REQUIREMENTS
- Pedestrian terrace
- Highly chemically resistant waterproofing membrane

SIKA SOLUTION
FPO-membrane with extended guarantee

SIKA SYSTEM
- Pavers on chipping bed min. 30 mm
- Protection layer Sarnafil® TG 63 or S-Felt T 300
- FPO membrane Sarnafil® TG 66
- XPS/EPS or PIR insulation
- Vapor control layer Sarnavap® 5000 E SA
- Concrete deck

REQUIREMENTS
- Pedestrian terrace

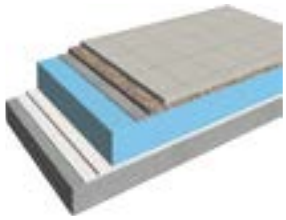
SIKA SOLUTION
PVC-membrane with lacquered surface and extended guarantee

SIKA SYSTEM
- Pavers on chipping bed min. 30 mm
- Protection layer Sarnafil® G 445 or S-Felt T 300
- PVC membrane Sarnafil® G 476 / G 410
- Separation layer S-Glass Fleece 120
- XPS/EPS or PIR insulation
- Vapor control layer Sarnavap® 5000 E SA
- Concrete deck

REQUIREMENTS
- Pedestrian terrace
- Standard guarantee (from your local Sika organization)

SIKA SOLUTION
Standard PVC membrane

SIKA SYSTEM
- Pavers on chipping bed min. 30 mm
- Protection layer Sikaplan® SBV or S-Felt T 300
- PVC membrane Sikaplan® SGmA
- Separation layer S-Glass Fleece 120
- XPS/EPS or PIR insulation
- Vapor control layer Sarnavap® 5000 E SA
- Concrete deck



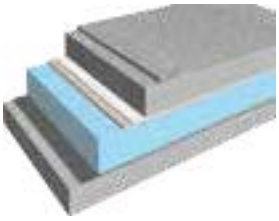
REQUIREMENTS
- Pedestrian terrace
- Highly chemically resistant waterproofing membrane
- Inverted roof build-up
- Additional protection of the membrane

SIKA SOLUTION
FPO-membrane with extended guarantee

SIKA SYSTEM
- Pavers on chipping bed min. 30 mm
- Filter layer S-Felt VS 140
- XPS insulation
- FPO membrane Sarnafil® TG 66
- Protection layer S-Felt A 300
- Concrete deck

LOOSE LAID SYSTEMS WITH SINGLE PLY MEMBRANES

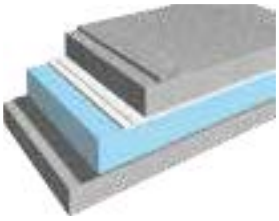
CAR TRAFFIC ROOFS



REQUIREMENTS
- Car traffic roof deck with asphalt wearing surface
- Highly chemically resistant waterproofing membrane

SIKA SOLUTION
FPO-membrane with extended guarantee

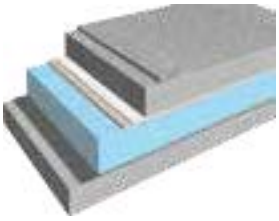
SIKA SYSTEM
- Asphalt wearing layer
- Concrete slab using Sika Viscocrete® concrete admixture technology
- Slip/protection layer S-Felt GK 400
- FPO membrane Sarnafil® TG 66
- XPS insulation
- Vapor control layer Sarnavap® 5000 E SA
- Concrete deck



REQUIREMENTS
- Car traffic roof deck with asphalt wearing surface

SIKA SOLUTION
PVC-membrane with extended guarantee

SIKA SYSTEM
- Asphalt wearing layer
- Concrete slab using Sika Viscocrete® concrete admixture technology
- Slip/protection layer S-Felt GK 400
- XPS insulation
- Separation layer S-Glass Fleece 120
- PVC membrane Sarnafil® G 410 / G 476
- Sarnacol® 2152
- Concrete deck



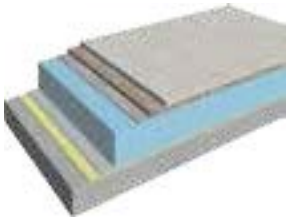
REQUIREMENTS
- Car traffic roof deck with asphalt wearing surface
- Highly chemically resistant waterproofing membrane

SIKA SOLUTION
Standard FPO membrane

SIKA SYSTEM
- Asphalt wearing layer
- Concrete slab using Sika Viscocrete® concrete admixture technology
- Slip/protection layer S-Felt GK 400
- FPO membrane Sikaplan® TB
- XPS insulation
- Vapor control layer Sarnavap® 5000 E SA
- Concrete deck

SYSTEMS WITH LIQUID APPLIED MEMBRANES

PEDESTRIAN TRAFFIC ROOFS



REQUIREMENTS

- Fast machine application
- Pedestrian terraces
- Seamless waterproofing
- No water underflow
- Inverted roof build-up

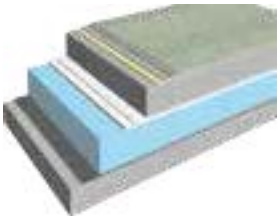
SIKA SOLUTION

Inverted build with 2-C PU

SIKA SYSTEM

- Pavers on chipping bed 20 mm
- Filter layer S-Felt VS 140
- XPS insulation
- Coat of Sikalastic®-851 R
- Primer coat Sikafloor®-156/161
- Concrete deck

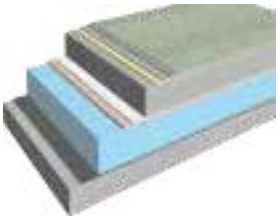
CAR TRAFFIC ROOFS



REQUIREMENTS
- Car traffic roof deck with durable, long lasting polymer top coating
- Highly chemically resistant waterproofing membrane

SIKA SOLUTION
FPO-membrane with extended guarantee and high quality polymer coating on top

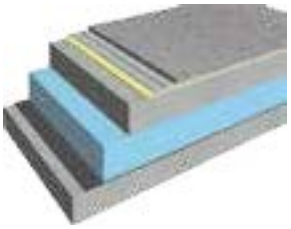
SIKA SYSTEM
- Top seal coat Sikafloor®-358
- Quartz sand broadcast
- Elastic coat Sikafloor®-350 N
- Primer Sikafloor® 156/161
- Concrete slab using Sika Viscocrete® concrete admixture technology
- Slip/protection layer S-Felt GK 400
- FPO membrane Sarnafil® TG 66
- XPS insulation
- Vapor control layer Sarnavap® 5000 E SA
- Concrete deck



REQUIREMENTS
- Car traffic roof deck with durable, long lasting polymer top coating
- Highly chemically resistant waterproofing membrane

SIKA SOLUTION
Standard FPO membrane

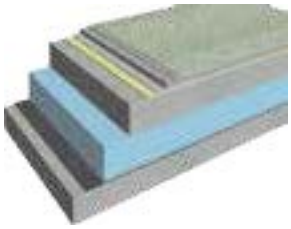
SIKA SYSTEM
- Top seal coat Sikafloor®-358
- Quartz sand broadcast
- Elastic coat Sikafloor®-350 N
- Primer Sikafloor® 156/161
- Concrete slab using Sika Viscocrete® concrete admixture technology
- Slip/protection layer S-Felt GK 400
- FPO membranevSikaplan® TB
- XPS insulation
- Vapor control layer Sarnavap® 5000 E SA
- Concrete deck



REQUIREMENTS
- Car traffic roof deck with asphalt wearing surface
- Fast machine application
- Possibility of direct asphalt application on waterproofing layer
- Highly chemically resistant waterproofing membrane
- Standard guarantee (from your local Sika organization)
- Seamless waterproofing
- No water underflow

SIKA SOLUTION
2-C PU waterproofing with hot asphalt

SIKA SYSTEM
- Asphalt layer applied directly on Sikalastic®-8901
- Coat of Sikalastic®-8901 broatcasted with Sikalastic®-827 HT pallets
- Coat of Sikalastic®-851 R
- Primer coat Sikafloor®-156/161
- Concrete slab using Viscocrete® concrete admixture technology
- XPS insulation
- Vapor control layer Sarnavap® 3000 M
- Concrete deck



REQUIREMENTS
- Car traffic roof deck with durable, long lasting polymer top coating
- Fast machine application
- Highly chemically resistant waterproofing membrane
- Standard guarantee (from your local Sika organization)
- Seamless waterproofing
- No water underflow

SIKA SOLUTION
2-C PU waterproofing with high quality polymer coating on top

SIKA SYSTEM
- Top seal coat Sikafloor®-358/359 N
- Quartz sand broadcast
- Wearing coat Sikafloor®-355 N
- Coat of Sikalastic®-851 R
- Primer coat Sikafloor®-156/161
- Concrete slab using Viscocrete® concrete admixture technology
- XPS insulation
- Vapor control layer Sarnavap® 3000 M
- Concrete deck

SOLUTIONS FOR SOLAR ROOFS

ROOFTOP SOLAR INSTALLATIONS are becoming increasingly popular worldwide. More and more building owners see the opportunity to make effective use of their roof space to make a contribution to the environment through sustainable electricity production. Such installations are investments intended to provide a return over the long-term.

SIKA IS FOCUSED ON SOLAR

Therefore, the roof itself needs a proven track record of high performance with low maintenance requirements as a critical component of solar applications that have an expected service life of 20+ years.

Sika has years of experience in the manufacture of liquid and single ply membranes that can live up to the demands for performance and life expectancy not only as stand alone waterproofing systems, but also ideal substrates for a variety of solar applications. For the main Photovoltaic technologies currently available, Sika can offer an ideally suited solution that ensures the overall performance of the solar application with as little maintenance and interruption as possible.

Sika has created "Solar Parks" at its own facilities to showcase its expertise and flexibility of dealing with solar systems used in rooftop applications.

HIGHLY REFLECTIVE LIQUID AND SINGLE PLY ROOFING MEMBRANES

Certain rooftop solar systems absorb light not only from the sun to produce electricity but also from the reflective roof surface itself – in some cases increasing the efficiency of the solar cell up to 15% (depending on the local conditions). Sika's highly reflective liquid and sheet membranes make a significant contribution to increased electricity production from the same area of solar roof space.

Sika® SolarMount-1

The Sika® SolarMount-1 is a lightweight, aerodynamic mounting system for the installation of rigid photovoltaic (PV) panels on low slope roofs, covered with single ply membranes from Sika. The SolarMount-1 system consists of the following components:

- PV Mount (support, 15° tilt angle)
- Sika® SolarClick FPO or PVC fasteners
- Accessories (rails, wind deflectors, clamps, screws)

Sika® SolarMount-1 can be assembled in a variety of configurations, in either South or East-West orientations. Actual design and layout will depend on building specific requirements, wind loads and other considerations.

Thanks to the hot-air welded connection between the Sika® SolarClick fasteners and the single ply membrane there is no horizontal movement of the PV array possible over time and additional ballast can be kept at lowest level.

SOLUTIONS FOR SPECIAL ROOF DESIGN AND COLORS

DESIGN FREEDOM IN ROOFING: Sika technologies and our extensive product range for roofing applications give almost unlimited possibilities in terms of special design and individual branding requirements.

DEFINITION OF SPECIAL ROOF DESIGN REQUIREMENTS

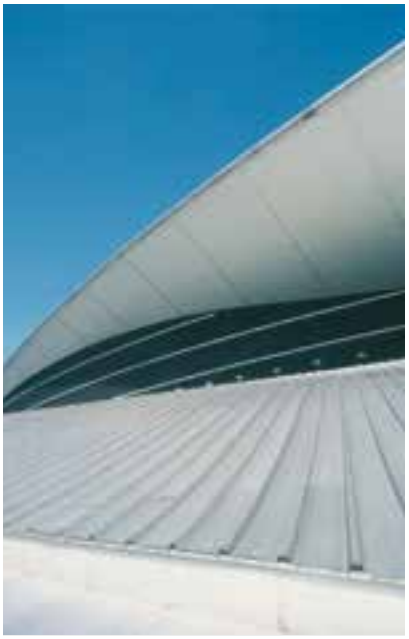
Commonly requested design and creative needs can be split into the following categories:

- Roofs with different colors
- Company logos and graphics on the roof
- Metal roof imitation – Standing seams and other profiles

All these special Sika solutions are:

- Reliable – all of the accessories, profiles or colored coatings required are fully compatible with the Sika waterproofing membranes
- Long-lasting – colored products have good color stability.

- Easily installed – company logos and décor profiles require no supporting structure, they are installed directly on the Sika waterproofing membranes.
- Additional value to your roof – logos, graphics and color can be a terrific 'eye catcher' for people and they can effectively attract and promote your brand or company name, differentiate your building and create a real landmark with your unique design.



LOGOS AND GRAPHICS ON THE ROOF

Logos on roofs are generally produced over:

- Sika single ply PVC or FPO membranes
- Sika liquid applied PU membranes

Sika solutions for creating logos on PVC or FPO membrane roofs include:

- Colored Sika membrane sheets cut to size & shape and then welded on top of the waterproofing membrane
- PU based coating Sikagard®-950 applied in the selected colors and design on top of the membrane. Sikagard®-950 are available in more 100 different colors or even color match is feasible.

Logos required on top of liquid applied membrane systems are easily produced using the same top coating materials in the different colors required.

RANGE OF COLORS

The widest colored membrane choices are available using Sarnafil® G 410 / S 327 PVC membranes. There is a standard color range and in addition to special / custom colors can be produced on request.

A certain standard color range is also available with Sikaplan® G / VGWT membrane.

Sikalastic® liquid applied membranes are available in a wide color range and can be produced upon request in customized colors.

METAL ROOF (STANDING SEAM) IMITATION

The single ply membranes Sarnafil® / Sikaplan® used together with the special Décor profiles (Sarnafil® Décor Profile / Décor Profile SE) allow our clients to imitate the look and appearance of a standing seam metal roof, but with the considerable advantages of Sika waterproofing membrane systems. These profiles are made out of the same material as the membranes, they are then easily welded on to the surface of the waterproofing system.

There are several clear advantages for this system compared to the conventional metal roofs:

- Faster and easier installation
- Simpler support structure and no need for additional ventilation gap
- Possibility of installation on lower slopes and gradients
- Secure waterproofing with easier detailing
- More cost effective

SOLUTIONS FOR THE REFURBISHMENT OF BITUMEN ROOFS

REFURBISHMENT OF OLD EXISTING BITUMEN ROOFS is by far the largest part of all roof reconstructions.

GENERAL DESCRIPTION
Sika has a full range of systems ideally suiting these roof refurbishment jobs:

- Adhered single ply membrane systems
- Mechanically fastened systems
- Liquid applied membrane systems

These systems can be installed with or without additional thermal insulation as required. For the selection of the right refurbishment system, a specific project survey and assessment has to be undertaken. Please contact the Technical Services Department of your local Sika company for assistance.

Compared to traditional bitumen re-roofing, all of the Sika refurbishment systems have many advantages:

- Longer life-expectancy and guarantees
- Availability of light colored reflective membranes which reflect heat and light, thus saving energy and costs
- Lower additional load on the structure – the additional weight of Sika single ply or liquid applied waterproofing is much lower than several layers of bitumen that would be required for the job
- Considerably higher flexibility and elasticity in cold temperatures
- No risk of fires during application due to the totally flame free installation methods
- Increased fire resistance of the waterproofing system itself

MECHANICALLY FASTENED SYSTEMS WITH Sarnafil® / Sikaplan®

- Mechanically fastened roofs are the most cost efficient systems
- Sarnafil® T polyolefin membranes are resistant to bitumen and can be applied directly on to the old bitumen waterproofing
- The fastest installation speed is achieved with mechanical fastening
- Sarnafil® / Sikaplan® membranes for mechanical fastening have special polyester reinforcement, enabling high wind load resistance
- Installation is almost not weather dependent

ADHERED SYSTEMS WITH Sarnafil® / Sikaplan®

Sarnafil® / Sikaplan® adhered roofing systems are designed specifically for roof refurbishment works, making them the No. 1 choice for the re-roofing of many bituminous roofs:

- Bitumen compatible membrane
- Membrane and insulation adhesives with excellent adhesion direct to bitumen
- No penetration of the existing roof build-up are required
- Very low noise emissions during installation
- Easy application on simple and complex roof shapes
- High aesthetic appearance and visual improvement
- Many design possibilities with colored membranes and profiles

LIQUID APPLIED MEMBRANE SYSTEMS WITH Sikalastic®

Sikalastic® liquid applied systems provide many advantages:

- Cold applied – no flame, no heat
- Seamless roof waterproofing membrane
- Fully bonded to the substrate
- In white, highly reflective and ideal for cool and solar roofs
- Easily recoated when needed – no stripping required
- Highly elastic and crack bridging – retains flexibility even at low temperatures
- Wide range of color selection
- UV stable and resistant to yellowing
- Ideal for refurbishment – provides a cost efficient life cycle extension for failing roofs
- No penetration of the roof deck
- Easy and fast installation even on complicated details
- Vapor permeable – allows the substrate to breathe

These systems are ideal for exposed roofs a lot of complicated detailing and penetrations.

MECHANICALLY FASTENED SYSTEMS

SYSTEMS WITHOUT ADDITIONAL INSULATION

REQUIREMENTS
- Fast and easy installation
- Special colors and design (metal roof imitation, décor profiles)

SIKA SOLUTION
PVC-membrane with lacquered surface and extended guarantee

SIKA SYSTEM
- Mechanically fastened build-up
- PVC membrane Sarnafil® S 327 mechanically attached to substrate with Sarnafast® SBF 6.0 mm and Sarnafast® Washer IF/IG-C
- Separation layer S-Felt A 300
- Existing build-up on concrete deck

REQUIREMENTS
- Fast and easy installation
- Highly chemically resistant waterproofing layer

SIKA SOLUTION
FPO membrane with extended guarantee

SIKA SYSTEM
- Mechanically fastened build-up
- FPO membrane Sarnafil® TS 77 mechanically fixed to the substrate with Sarnafast® SBF 6.0 mm and Sarnafast® Washer IF/IG-C
- Existing build-up on concrete deck

REQUIREMENTS
- Fast and easy installation
- Standard guarantee (from your local Sika organization)

SIKA SOLUTION
Standard PVC membrane

SIKA SYSTEM
- Mechanically fastened build-up
- PVC membrane Sikaplan® G mechanically fixed to the substrate with Sarnafast® SBF 6.0 mm and Sarnafast® Washer IF/IG-C
- Separation layer S-Felt A 300
- Existing build-up on concrete deck

REQUIREMENTS
- Fast and easy installation
- Highly chemically resistant waterproofing layer

SIKA SOLUTION
Standard FPO membrane

SIKA SYSTEM
- Mechanically fastened build-up
- FPO membrane Sikaplan® TB mechanically fixed to the substrate with Sarnafast® SBF 6.0 mm and Sarnafast® Washer IF/IG-C
- Existing build-up on concrete deck

SYSTEMS WITH ADDITIONAL INSULATION

REQUIREMENTS
- Additional thermal insulation
- Special colors and design (metal roof imitation, décor profiles)

SIKA SOLUTION
PVC-membrane with lacquered surface and extended guarantee

SIKA SYSTEM
Mechanically fastened build-up
- PVC membrane Sarnafil® S 327 mechanically fixed to the substrate with Sarnafast® SBF 6.0 mm and Sarnafast® Washer KTL
- Separation layer S-Glass Fleece 120 (with EPS/XPS insulation)
- New thermal insulation
- Existing build-up on concrete deck

REQUIREMENTS
- Additional thermal insulation
- Highly chemically resistant waterproofing layer

SIKA SOLUTION
FPO membrane with extended guarantee

SIKA SYSTEM
Mechanically fastened build-up
- FPO membrane Sarnafil® TS 77 mechanically fixed to the substrate with Sarnafast® SBF 6.0 mm and Sarnafast® Washer KTL
- New thermal insulation
- Existing build-up on concrete deck

REQUIREMENTS
- Additional thermal insulation
- Standard guarantee
- Optional: slip resistant surface

SIKA SOLUTION
Standard PVC membrane
Optional: increased fire and cold resistance

SIKA SYSTEM
Mechanically fastened build-up
- PVC membrane Sikaplan® G mechanically fixed to the substrate with Sarnafast® SBF 6.0 mm and Sarnafast® Washer KTL
- Separation layer S-Glass Fleece 120 (with EPS/XPS insulation)
- New thermal insulation
- Existing build-up on concrete deck

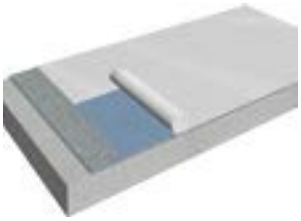
REQUIREMENTS
- Additional thermal insulation
- Standard guarantee
- Highly chemically resistant waterproofing layer

SIKA SOLUTION
Standard FPO membrane

SIKA SYSTEM
Mechanically fastened build-up
- FPO membrane Sikaplan® TM mechanically fixed to the substrate with Sarnafast® SBF 6.0 mm and Sarnafast® Washer KTL
- New thermal insulation
- Existing build-up on concrete deck

ADHERED SYSTEMS

SYSTEMS WITHOUT ADDITIONAL INSULATION



REQUIREMENTS

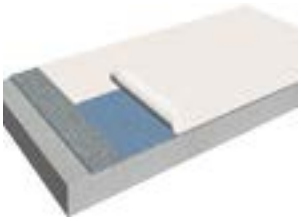
- Special colors and design (metal roof imitation, décor profiles)
- Lacquered surface
- No drilling into the deck and no penetrations
- Low noise emission during refurbishment

SIKA SOLUTION

Fully adhered lacquered felt-backed PVC membrane with extended guarantee

SIKA SYSTEM

- PVC membrane Sarnafil® G 410 Felt fully adhered to the bitumen substrate with Sarnacol® 2142 S adhesive
- Existing build-up on concrete deck



REQUIREMENTS

- Highly chemically resistant waterproofing layer
- No drilling into the deck and no penetrations
- Low noise emission during refurbishment

SIKA SOLUTION

Fully adhered felt-backed FPO membrane with extended guarantee

SIKA SYSTEM

- FPO membrane Sarnafil® TG 76 Felt fully adhered to the bitumen substrate with Sarnacol® 2142 S adhesive
- Existing build-up on concrete deck

REQUIREMENTS
- Easy and fast installation
- Standard guarantee (from your local Sika organization)
- No drilling into the deck and no penetrations
- Low noise emission during refurbishment
- Limited lateral water underflow

SIKA SOLUTION

Self-adhered PVC membrane

SIKA SYSTEM
- PVC membrane Sikaplan® RV-s bonded directly to the bitumen substrate
- Surface preparation with Primer 600
- Existing build-up on concrete deck

REQUIREMENTS
- Fast installation
- Standard guarantee (from your local Sika organization)
- No drilling into the deck and no penetrations
- Low noise emission during refurbishment

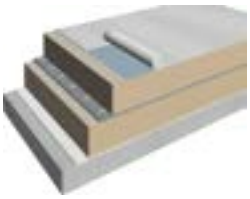
SIKA SOLUTION

Partly adhered standard felt-backed PVC membrane

SIKA SYSTEM
- PVC membrane Sikaplan® SGK partially adhered to the bitumen substrate with Sika® C 300 adhesive
- Existing build-up on concrete deck

ADHERED SYSTEMS

SYSTEMS WITH ADDITIONAL INSULATION

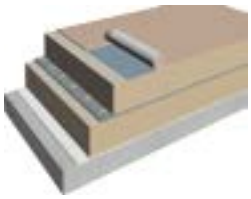


REQUIREMENTS
- Additional thermal insulation
- Special colors and design (metal roof imitation, décor profiles)
- Lacquered surface
- No penetration into the roof deck (when all roof build-up components are adhered)
- Low noise emission during refurbishment

SIKA SOLUTION

Fully adhered felt-backed PVC membrane with extended guarantee

SIKA SYSTEM
- PVC membrane Sarnafil® G 410 Felt fully adhered to the insulation with Sarnacol® 2142 S adhesive
- PIR, XPS/EPS insulation bonded to the bitumen with Sarnacol® 2162 or mechanically fastened to the substrate
- Existing build-up on concrete deck



REQUIREMENTS
- Additional thermal insulation
- Highly chemically resistant waterproofing layer
- No penetration into the roof deck (when all roof build-up components are adhered)
- Low noise emission during refurbishment

SIKA SYSTEM
- FPO membrane Sarnafil® TG 76 Felt fully adhered to the insulation with Sarnacol® 2142 S adhesive
- PIR, XPS/EPS insulation bonded to the bitumen with Sarnacol® 2162 or mechanically fastened to the substrate
- Existing build-up on concrete deck

REQUIREMENTS
- Additional thermal insulation
- Standard guarantee (from your local Sika organization)
- No penetration into the roof deck (when all roof build-up components are adhered)
- Low noise emission during refurbishment
- Limited lateral water underflow

SIKA SOLUTION

Self-adhered PVC membrane

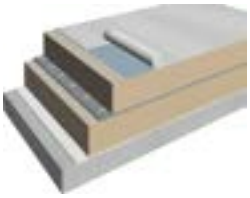
SIKA SYSTEM
- PVC membrane Sikaplan® RV-s adhered to the insulation
- PIR, XPS/EPS insulation bonded to the bitumen with Sarnacol® 2162 or mechanically fastened to the substrate
- Existing build-up on concrete deck

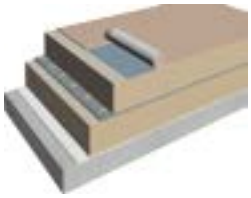
REQUIREMENTS
- Additional thermal insulation
- Standard guarantee (from your local Sika organization)
- No penetration into the roof deck (when all roof build-up components are adhered)
- Low noise emission during refurbishment

SIKA SOLUTION

Partly adhered standard felt-backed PVC membrane

SIKA SYSTEM
- PVC membrane Sikaplan® SGK partially adhered to the insulation with Sika C 300 adhesive
- PIR, XPS/EPS insulation bonded to the bitumen with Sarnacol® 2162 or mechanically fastened to the substrate
- Existing build-up on concrete deck





REQUIREMENTS

- Additional thermal insulation
- Special design (metal roof imitation, décor profiles)
- Lacquered surface
- No penetration into the roof deck (when all roof build-up components are adhered)
- Low noise emission during refurbishment
- Limited lateral water underflow

SIKA SOLUTION

Fully self adhered lacquered PVC membrane

SIKA SYSTEM

- PVC membrane Sarnafil® G 410 SA fully self adhered to the insulation
- PIR insulation bonded to the bitumen with Sarnacol® 2162 or mechanically fastened to the substrate
- Existing build-up on concrete deck

REQUIREMENTS

- Additional thermal insulation
- Highly chemically resistant waterproofing layer
- No penetration into the roof deck (when all roof build-up components are adhered)
- Low noise emission during refurbishment

SIKA SOLUTION

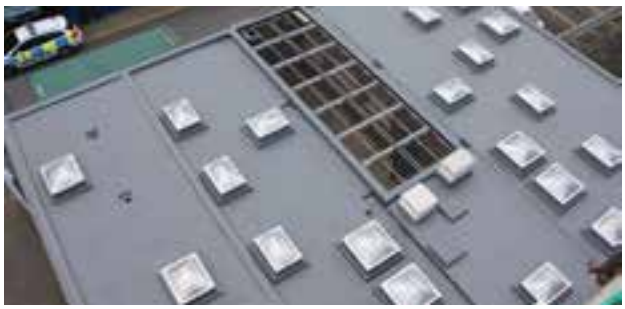
Fully self adhered felt-backed FPO membrane

SIKA SYSTEM

- FPO membrane Sarnafil® TG 76 FSA fully self adhered to the insulation
- Primer 600 / Primer 780 if required
- PIR/EPS insulation bonded to the bitumen with Sarnacol® 2162 or mechanically fastened to the substrate
- Existing build-up on concrete deck

LIQUID APPLIED SYSTEMS

SYSTEMS WITHOUT ADDITIONAL INSULATION



REQUIREMENTS
- Seamless waterproofing
- Fast curing
- No penetration of the roof deck
- Extended guarantee (from your local Sika organization)
- Increased fire resistance
- No water underflow

SIKA SOLUTION
Cold roof waterproofing with SikaRoof® MTC Systems

SIKA SYSTEM
SikaRoof® MTC 12/15/18/22
- 1 or 2 top coats of Sikalastic®-621 TC
- Reinforcement with Sikalastic® Reemat
- Base coat Sikalastic®-601 BC
- Sikalastic® Metal Primer
- Existing bitumen

REQUIREMENTS
- Seamless waterproofing
- Low odour
- No penetration of the roof deck
- Extended guarantee (from your local Sika organization)
- Increased fire resistance
- No water underflow

SIKA SOLUTION
Cold roof waterproofing with Sikalastic®-641 Systems

SIKA SYSTEM
Sikalastic®-641 Systems
- 1 or 2 top coats of Sikalastic®-641
- Reinforcement with Sikalastic® Reemat
- Base coat Sikalastic®-641
- Sikalastic® Metal Primer
- Existing bitumen

REQUIREMENTS
- Seamless waterproofing
- Fast application
- Solvent free
- No penetration of the roof deck
- Extended guarantee (from your local Sika organization)
- No water underflow

SIKA SOLUTION
Cold roof waterproofing with Sikalastic®-851 R

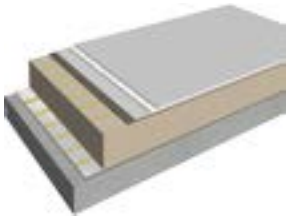
SIKA SYSTEM
Sikalastic®-851 R System
- 1 top coat of Sikalastic®-621 TC
- Base coat Sikalastic®-851 R
- Sikafloor®-156/161 or Sika Metal Primer
- Existing bitumen

REQUIREMENTS
- Seamless waterproofing
- Low odour
- Solvent free
- No penetration of the roof deck
- No water underflow

SIKA SOLUTION
Cold roof waterproofing with Sikalastic®-560 Systems

SIKA SYSTEM
Sikalastic®-560 Systems
- 1 – 3 top coats of Sikalastic®-560
- Reinforcement with Sikalastic® Fleece-120
- Base coat Sikalastic®-560
- Sikalastic®-560 diluted with 10% water
- Existing bitumen

SYSTEMS WITH THERMAL INSULATION



REQUIREMENTS

- Additional thermal insulation
- Seamless waterproofing
- No penetration of the roof deck
- Extended guarantee (from your local Sika organization)
- No water underflow

SIKA SOLUTION

Warm roof build up roofing system with Sikalastic® liquid applied membranes

SIKA SYSTEM

- Waterproofing system: SikaRoof® MTC, Sikalastic®-641, Sikalastic®-851 R or Sikalastic®-560
- Carrier layer Sikalastic® Carrier bonded with Sarnacol® 2162
- PIR or EPS insulation bonded with Sarnacol® 2162
- Vapor control layer Sarnavap® 5000 SA
- Existing bitumen

SOLUTIONS FOR THE REFURBISHMENT OF METAL ROOFS

METAL ROOFS are also frequently in need of refurbishment and re-waterproofing due to the typical problems.

GENERAL DESCRIPTION
Metal roofs are also frequently in need of refurbishment and re-waterproofing due to the typical problems of:

- Metal corrosion
- High metal expansion and contraction over time, leading to loose fasteners and cracks in seals and joints
- Condensation
- Leaks related to the waterproofing of difficult details, joints and connections (i.e. inner gutters, sky-lights etc.)

The suitable Sika systems for the refurbishment of existing metal roofs are based on:

- Single ply membranes Sarnafil®
- Liquid applied membranes Sikalastic®

These systems are designed to solve all of the above problems, to provide you with a durable, long-lasting and sustainable watertight metal roof refurbishment solution.

MECHANICALLY FASTENED SYSTEMS WITH Sarnafil®
This system requires additional thermal insulation to be added and create a smooth surface which is suitable for loose laying the membrane over, in addition to the thermal improvements that are gained.

By selecting this system you obtain:

- A watertight system without problem points, like gutters, connections, flashings, etc. are securely waterproofed)
- Reduced energy and heating/cooling costs due to the additional thermal insulation and highly reflective membranes
- Long life expectancy and low life-cycle maintenance costs

LIQUID APPLIED MEMBRANE SYSTEMS WITH Sikalastic®
This is the fast and easy way to renovate your metal roofs by spraying these advanced liquid applied membranes on to the cleaned and primed (where required) metal surfaces.

The Sika liquid membrane solutions provide:

- Restored water tightness
- Additional protection for the metal deck
- Reduced 'heat island' effect (light, highly reflective surface)

REQUIREMENTS

- Additional thermal and acoustic insulation
- Special colors and design (décor profiles)
- Extended guarantee (from your local Sika organization)
- Lacquered surface

SIKA SOLUTION

PVC membrane with extended guarantee

SIKA SYSTEM

- PVC membrane Sarnafil® S 327 mechanically fixed to substrate
- Mineral wool or PIR insulation
- Flute filler
- Metal deck
- Purlin

REQUIREMENTS

- Additional thermal and acoustic insulation
- High chemical resistance of the waterproofing membrane
- Extended guarantee (from your local Sika organization)

SIKA SOLUTION

FPO membrane with extended guarantee

SIKA SYSTEM

- FPO membrane Sarnafil® TS 77 mechanically fixed to substrate
- Mineral wool or PIR insulation
- Flute filler
- Metal deck
- Purlin

REQUIREMENTS

- Fast and easy installation (direct application on metal without any levelling layers)
- Seamless waterproofing
- No penetration of the metal deck
- Extended guarantee (from your local Sika organization)

SIKA SOLUTION

Metal roof waterproofing with Sikalastic®-621 TC

SIKA SYSTEM

- Sikalastic®-621 TC in 1 or 2 coats
- On overlaps reinforced with Sika Flexistrip & Sikalastic® Flexitape embedded in 1 coat of Sikalastic®-621 TC
- On bold heads reinforced with Sika Flexistrip & Sika Reemat embedded in 1 coat of Sikalastic®-621
- Sikalastic® Metal Primer, where required
- Metal deck

REQUIREMENTS

- Fast and easy installation (direct application on metal without any levelling layers)
- Seamless waterproofing
- No penetration of the metal deck
- Solvent free

SIKA SOLUTION

Metal roof waterproofing with Sikalastic®-560

SIKA SYSTEM

- Sikalastic®-560 in 2 or 3 coats
- On overlaps reinforced with Sika Flexistrip & Sikalastic® Flexitape embedded in 1 coat of Sikalastic®-560
- On bold heads reinforced with Sika Flexistrip & Sika Reemat embedded in 1 coat of Sikalastic®-560
- Sikalastic® Metal Primer, where required
- Metal deck

SOLUTIONS FOR THE REFURBISHMENT OF POLYMERIC ROOFS – EPDM, PVC, FPO

THE REFURBISHMENT OF POLYMERIC MEMBRANE ROOFS is becoming more and more common.

GENERAL DESCRIPTION

As with bitumen roof refurbishment, Sika provides the best-performing systems for this purpose which include:

- Mechanically fastened membrane systems
- Liquid applied membranes
- These can both be installed either with, or without additional thermal insulation; to meet new environmental standards or reduce energy costs

For the best selection of a refurbishment solution, a specific project roof survey and assessment has to be undertaken. Please contact the Technical Services Department of your local Sika organization for assistance.

MECHANICALLY FASTENED SYSTEMS WITH Sarnafil® / Sikaplan®

- Mechanically fastened roofs are usually the most cost efficient solution for polymeric sheet membrane roof refurbishment
- These also have the fastest refurbishment installation speed
- The Sarnafil® / Sikaplan® membranes for mechanical fixing have special polyester reinforcement to give them high wind load resistance
- Installation is almost non weather dependent

LIQUID APPLIED MEMBRANE SYSTEMS WITH Sikalastic®

Sikalastic® liquid applied systems provide many advantages:

- Primer for direct application on polymeric membranes
- Cold applied – no flame, no heat
- Seamless roof waterproofing membrane
- Fully bonded to the substrate
- In white, highly reflective and ideal for cool and solar roofs
- Easily recoated when needed – no stripping required
- Highly elastic and crack bridging – retains flexibility even at low temperatures
- Wide range of color selection
- UV stable and resistant to yellowing
- Ideal for refurbishment – provides a cost efficient life cycle extension for failing roofs
- No penetration of the roof deck
- Easy and fast installation even on complicated details
- Vapor permeable – allows the substrate to breathe

These systems are ideal for exposed roofs with a lot of complicated detailing and penetrations.

MECHANICALLY FASTENED SYSTEMS

SYSTEMS WITHOUT ADDITIONAL INSULATION

REQUIREMENTS
- Fast and easy installation
- Special colors and design possibilities (metal roof imitation, décor profiles)

SIKA SOLUTION
PVC-membrane with lacquered surface and extended guarantee

SIKA SYSTEM
Mechanically fastened system build-up
- PVC membrane Sarnafil® S 327 mechanically fixed to the substrate with Sarnafast® SF 4.8 mm and Sarnafast® Washer KT
- Separation layer S-Felt A 300
- Existing build-up on steel deck

REQUIREMENTS
- Fast and easy installation
- High chemical resistance of the waterproofing layer

SIKA SOLUTION
FPO membrane with extended guarantee

SIKA SYSTEM
Mechanically fastened system build-up
- FPO membrane Sarnafil® TS 77 mechanically fixed to the substrate with Sarnafast® SF 4.8 mm and Sarnafast® Washer KT
- Existing build-up on steel deck

REQUIREMENTS
- Fast and easy installation
- Standard guarantee
- Optional: slip resistant surface

SIKA SOLUTION
Standard PVC membrane
Optional: increased fire and cold resistance

SIKA SYSTEM
Mechanically fastened system build-up
- PVC membrane Sikaplan® G mechanically fixed to the substrate with Sarnafast® SF 4.8 mm and Sarnafast® Washer KT
- Separation layer S-Felt A 300
- Existing build-up on steel deck

REQUIREMENTS
- Fast and easy installation
- Standard guarantee

SIKA SOLUTION
Standard FPO membrane

SIKA SYSTEM
Mechanically fastened system build-up
- FPO membrane Sikaplan® TM mechanically fixed to the substrate with Sarnafast® SF 4.8 mm and Sarnafast® Washer KT
- Existing build-up on steel deck

SYSTEMS WITH ADDITIONAL INSULATION

REQUIREMENTS
- Additional thermal insulation
- Special color and design possibilities (metal roof imitation, décor profiles)

SIKA SOLUTION
PVC-membrane with lacquered surface and extended guarantee

SIKA SYSTEM
Mechanically fastened system build-up
- PVC membrane Sarnafil® S 327 mechanically fixed to the substrate with Sarnafast® SF 4.8 mm and Sarnafast® Washer KT
- Separation layer S-Glass Fleece 120 (for use with EPS/XPS insulation)
- Thermal insulation
- Existing build-up on steel deck

REQUIREMENTS
- Additional thermal insulation
- High chemical resistance of the waterproofing system

SIKA SOLUTION
FPO membrane with extended guarantee

SIKA SYSTEM
Mechanically fastened system build-up
- FPO membrane Sarnafil® TS 77 mechanically fixed to the substrate with Sarnafast® SF 4.8 mm and Sarnafast® Washer KT
- Thermal insulation
- Existing build-up on steel deck

REQUIREMENTS
- Additional thermal insulation
- Standard guarantee
- Optional: slip resistant surface

SIKA SOLUTION
Standard PVC membrane
Optional: increased fire and cold resistance

SIKA SYSTEM
Mechanically fastened system build-up
- PVC membrane Sikaplan® G mechanically fixed to the substrate with Sarnafast® SF 4.8 mm and Sarnafast® Washer KT
- Separation layer S-Glass Fleece 120 (for use with EPS/XPS insulation)
- Thermal insulation
- Existing build-up on steel deck

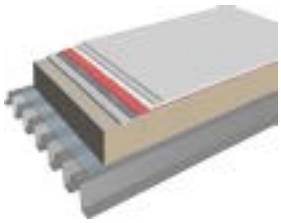
REQUIREMENTS
- Additional thermal insulation
- Standard guarantee

SIKA SOLUTION
Standard FPO membrane

SIKA SYSTEM
Mechanically fastened system build-up
- FPO membrane Sikaplan® TM mechanically fixed to the substrate with Sarnafast® SF 4.8 mm and Sarnafast® Washer KT
- Thermal insulation
- Existing build-up on steel deck

SYSTEMS WITH LIQUID APPLIED MEMBRANES

SYSTEMS WITHOUT ADDITIONAL INSULATION



REQUIREMENTS
- Seamless waterproofing
- Possibility of partial repairs
- Fast curing
- No penetration of the roof deck
- Extended guarantee (from your local Sika organization)
- Increased fire resistance
- No water underflow

SIKA SOLUTION
Roof waterproofing with SikaRoof® MTC Systems

SIKA SYSTEM
SikaRoof® MTC 12/15/18/22
- 1 or 2 top coats of Sikalastic®-621 TC
- Reinforcement with Sikalastic® Reemat
- Base coat Sikalastic®-601 BC
- Primer
- Sikalastic® Primer PVC for PVC, Sikalastic® Primer FPO for FPO or Sikalastic® EPDM Primer for EPDM
- Existing build-up on steel deck

REQUIREMENTS
- Seamless waterproofing
- Possibility of partial repairs
- Low odor
- No penetration of the roof deck
- Extended guarantee (from your local Sika organization)
- Increased fire resistance
- No water underflow

SIKA SOLUTION
Roof waterproofing with Sikalastic®-641 Systems

SIKA SYSTEM
Sikalastic®-641 Systems
- 1 or 2 top coats of Sikalastic®-641
- Reinforcement with Sikalastic® Reemat
- Base coat Sikalastic®-641
- Sikalastic® Metal Primer
- Sikalastic® Primer PVC for PVC, Sikalastic® Primer FPO for FPO or Sikalastic® EPDM Primer for EPDM
- Existing build-up on steel deck

SYSTEMS WITH ADDITIONAL THERMAL INSULATION

REQUIREMENTS

- Additional thermal insulation
- Seamless waterproofing
- No penetration of the roof deck
- Extended guarantee (from your local Sika organization)
- No water underflow

SIKA SOLUTION

Warm roof build-up roofing system with Sikalastic® liquid applied membranes

SIKA SYSTEM

- Waterproofing system: SikaRoof® MTC, Sikalastic®-641, Sikalastic®-851 R or Sikalastic®-560
- Carrier layer Sikalastic® Carrier bonded with Sarnacol® 2162
- PIR or EPS insulation bonded with Sarnacol® 2162
- Existing build-up on steel deck

PERFORMANCE AND INSTALLATION RELATED REQUIREMENTS

UV LIGHT RESISTANCE

Light, especially energy-rich ultraviolet light, has an ageing effect on roof membranes that can eventually result in surface cracking and degradation. Sika roofing membranes for exposed roofs are all more than sufficiently UV stabilized against this to perform for the long term, even in extreme climates and locations with high UV light exposure.

HIGH FIRE RESISTANCE

Fire resistance requirements can be very individual and dependent on the type of construction and use of the building. If the roofing membrane is the top roof surface, then the membrane material must generally be classified as self-extinguishing. Sika roofing materials are all designed to comply with this and all relevant international and local building regulations in terms of fire.

COMPATIBILITY TO BITUMEN

As bitumen has been used as a traditional roofing material for many years, it is often still present on existing roofs to be refurbished or upgraded in terms of waterproofing, fire or insulation. For a fast and secure solution bitumen compatibility is a major requirement. Sika provides systems which are bitumen-resistant and can be used in almost any refurbishment situation.

RESISTANCE TO COLD

The weather around the world provides different climatic conditions in which roofing systems have to perform and resistance to minus temperatures is one of the main requirements here. All membranes from Sika stay flexible in cold within their stated performance limits. Some Sika roofing systems have the advantage that they can be installed at temperatures below zero.

THERMAL SHOCK RESISTANCE

Sika roof waterproofing membranes and all of the ancillary roofing products are specially designed to withstand sudden changes of temperature and weather conditions. They will not be damaged by extended or sudden thermal changes in cold, heat, snow, hail, rain, etc.

SLIP RESISTANCE

The Sika roofing product range includes sheet membranes with embossed surfaces to provide slip resistance. Different degrees of slip resistance can be also achieved with Sika liquid applied membranes by broadcasting with selected grades of quartz sand.

ROOT RESISTANT

Membranes used under ballast must also withstand penetration from the roots of plants. Roof gardens and other green roofs obviously have a particular requirement for this, not only from the membrane, but also at their welded seams, connections and terminations. Sika single ply and liquid applied membranes for ballasted roof systems all resist root penetration and are treated to be resistant against micro-organisms, or they are inherent by fully resistant.

RESISTANCE TO PEDESTRIAN AND LIGHT WHEELED TRAFFIC

Increasingly, roofing systems are being used for areas exposed to pedestrian and vehicular traffic, i.e. on roof terraces or car parking areas. If the roofing membrane is the top surface for traffic, it must withstand this abrasion and wear without additional protection. It also has to be slip-resistant and may need different colors for line marking etc. Sika liquid applied membrane systems provide full service trafficability for pedestrians and / or vehicles as required.

FAST INSTALLATION

Installation time is always an important issue and cost factor for roofing systems. Sika has developed many special roofing systems and ancillary products which allow extremely rapid and cost effective installation.

MECHANICAL FASTENINGS AND FIXINGS

If the membrane is installed as the top layer of the roof, wind uplift will occur through wind suction and pressure. The membrane must therefore be restrained against wind uplift and the most cost effective method of doing this is by mechanical fastening into the support structure. Sika systems are designed to withstand wind loads using the most efficient fixings.

NO PENETRATION INTO THE DECK

A mechanical fastening system may not be possible due to unacceptable drilling noise for the fixings, contamination through the deck, or due to the structural design itself. All of these difficulties and their potential costs can be overcome by using Sika adhered, ballasted or liquid applied membrane systems.

LOOSE LAID BUILD-UP

Loose laying of the flexible membrane and its ancillary materials is the main method established to build-up a roof deck and waterproofing system. It allows free air flow to ventilate the thermal insulation and it also helps to compensate for the structure's movement. The membrane must then be mechanically fixed or ballasted for restraint against wind uplift.

PARTIALLY ADHERED TO THE SUBSTRATE

If the membrane is to be used in an exposed situation, but mechanical fixing is not desirable for technical or other reasons, all layers of the system build-up must be bonded to the substrate below. In Sika partially adhered systems the liquid adhesive is applied on the substrate in beads or strips. This provides fast cost effective installation with low adhesive consumption.

FULLY ADHERED TO THE SUBSTRATE

Superior aesthetic appearance, regardless of the roof shape, or with no penetration of the roof deck, is often a requirement for both new and refurbishment projects. With Sika fully adhered systems the membrane is fully bonded to the substrate, therefore it can meet these high aesthetic and performance requirements reliably and with low maintenance costs.

HIGHEST AESTHETIC APPEARANCE

Sometimes roofing materials not only have an important waterproofing function, but they must also meet high design and architectural requirements. Sika has developed several advanced systems suitable for installation over complex roof sha pes with good looking top surfaces, i.e. including smooth surfaces, standing seam metal roof imitation and other special profiles, etc.

WIDE COLOR RANGE

Sika membranes are supplied in several standard colors, some in an extensive range. Special colors can also be made to order or color matched to a client's requirements.

SEAMLESS WATERPROOFING

The Sika liquid applied membranes provide seamless waterproofing over the entire roof surface. In addition to technical advantages, it can also create an excellent visual appearance.

CRACK BRIDGING ABILITY

The Sika liquid applied membranes in particular can provide outstanding crack bridging properties, with high flexibility and elasticity – even at low temperatures.

SINGLE COMPONENT PRODUCTS

1-C Sika liquid applied membranes are probably the easiest to install. They are applied 'direct from the can' and do not require mixing with other components.

GOOD VAPOR PERMEABILITY

Sika has developed membranes which are waterproof, but with excellent vapor diffusion properties. This allows any moisture in the structure below to evaporate.

EASY APPLICATION BY BRUSH OR ROLLER

Sika liquid applied membranes can be applied by brush and roller. This application is easy and does not require investment in expensive application equipment.

SUSTAINABILITY IN ROOFING

SIKA IS COMMITTED to pioneering long lasting and sustainable roofing solutions to address global challenges, and to achieve this safely at the lowest impact on resources.

GENERAL OVERVIEW

Sika roofing membranes and systems are manufactured in ISO 14001 certified production facilities. Furthermore, they contribute to sustainable construction and they are evaluated with a fully comprehensive Life Cycle Assessment method (LCA). The following sustainability aspects are relevant for roofing systems and are systematically assessed:

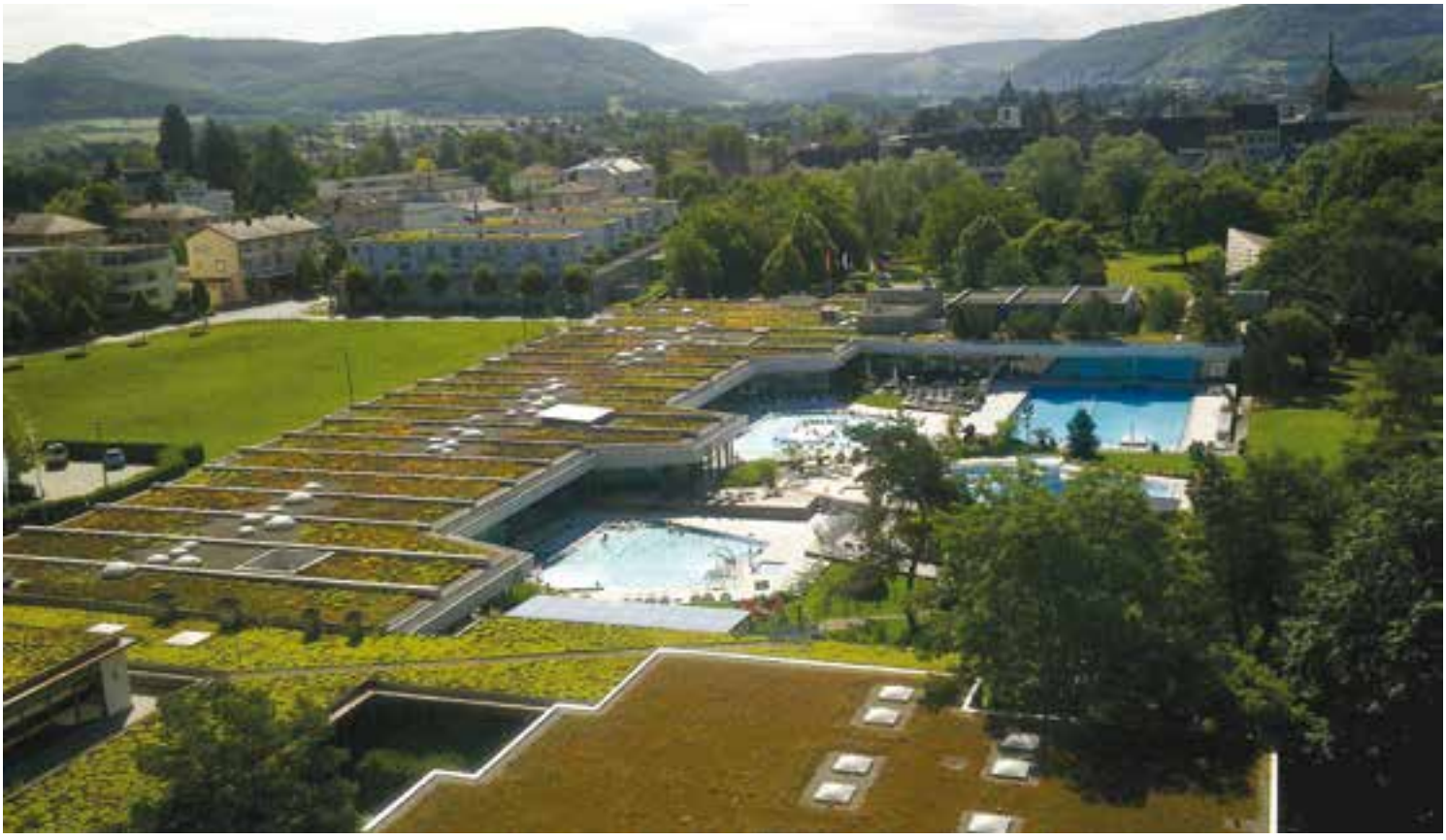
- Energy and Carbon Footprint
- Durability
- High reflectivity
- Recycling
- Air protection

ENERGY AND CARBON FOOTPRINT

The Energy Footprint is the measurement of the amount of energy required to produce 1 m^2 of roofing membrane, whereas the Carbon Footprint measures the carbon embodied within the product. Generally the lower the embodied energy and carbon levels, the better the product is for the environment. Sika roofing solutions have low embodied energy and carbon, contributing less to global warming and having higher resource efficiency compared with alternative roofing technologies. Additionally, Sika roofing solutions can contribute to minimizing the resource consumption over the entire value chain.

DURABILITY

The durability of building materials is a key driver for sustainable building construction. Long service life is a key element of sustainability, the longer the roofing solution lasts, the less impact it has to the environment. Internal and external studies have proven the outstanding service life of Sarnafil® and Sikaplan® roofing systems. As an example, "The British Board of Agrément (BBA)", certifies Sika's thermoplastic Sarnafil® G/S >= 1.5 mm membranes to have a life expectancy that is "in excess of 40 years". On the other hand, SikaRoof® MTC liquid membranes are an outstanding refurbishment solution, to extend the lifetime of existing roofs.



HIGH REFLECTIVITY
The benefits of solar reflective materials are well known and understood in warm climates around the world. White highly reflective membranes dramatically increase reflectivity and reduce both the Heat Island effect and the cooling energy consumption requirements for buildings. Sika roofing systems include highly reflective, thermoplastic and PU liquid applied membranes with an initial SRI (Solar Reflectance Index) above 110 – contributing to Green Building Certification rating as well. Ronnen Levinson & Hashem Akbari's December 2007 report "Potential Energy Savings and Environmental Benefits of Cool Roofs on Commercial Buildings" demonstrated that by changing from a relatively low solar reflectivity light grey membrane, to a higher reflectivity white membrane, large energy and energy cost savings could be made.

RECYCLING
Sika has proactively recycled factory wastes back into production since 1960. Wherever possible, higher quantities of production and post-consumer membranes are recycled into new products, such as roof protection sheets and walkway pads. Today walkway pads, manufactured in Europe since 2000, provide tough, durable solutions for pedestrian access on exposed roofs. These walkway pads are produced from almost 100% recycled material. Post-consumer membrane recycling is common practice in Europe and is managed through the company's involvement with the Roofcollect scheme operated by Vinyl Plus.

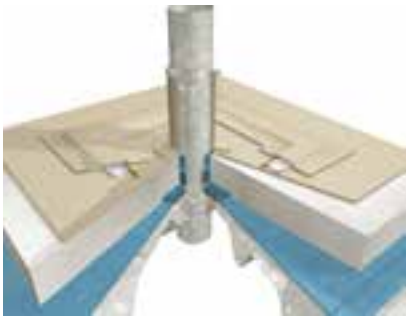
AIR PROTECTION
Sika provides low VOC and VOC-free roofing solution which help to avoid Summer Smog and improve health and safety conditions during the roof installation process. The low odor performance of Sika products has been tested and certified according to EN 13725:2003 by an external accredited institute.

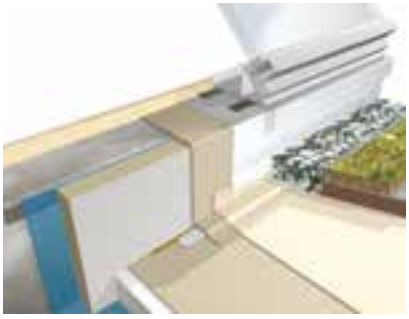
For further information on Sika's Sustainable Roofing Solutions please consult the Roofing Sustainability brochure or visit www.sika.com/sustainability

MAIN ACCESSORIES AND ANCILLARY PRODUCTS

SIKA IS KNOWN as a reliable and innovative system provider which supplies not only membranes, but also accessories.

We fully understand the membrane materials and the various available roofing systems in the market. Our teams have a lot of experiences on the construction sites. We also know how to solve problems at detailing and how to improve the quality and efficiency of the roofing application. Based on these knowledges, we have a big range of roofing accessories with reliable quality and reasonable design. According to your needs, we will recommend you the most suitable and economical products.





VAPOR CONTROL LAYERS

VAPOR CONTROL LAYERS are placed between the substrate and the thermal insulation to prevent the roof build-up from absorbing moisture.

PE VAPOR CONTROL LAYERS

A wide range of PE foils with different densities and design to cater for all common applications

- High water vapor resistance
- Cost effective solutions
- Easily attached to each other with adhesive tapes
- Suitable for all main substrates (steel, concrete, wood)
- Very low weight gives no additional load on the structure
- High flexibility at low temperatures

SIKA PRODUCTS:

Sarnavap® 500E
- Thickness 0.15 mm
- Good water vapor permeability resistance (sd value 100 m)
- Compatible with PVC membrane systems

Sarnavap® 1000E
- Thickness 0.20 mm
- High water vapor permeability resistance (sd value 220 m)
- Compatible with PVC and FPO membrane systems

Sarnavap® 2000E
- Thickness 0.225 mm
- Very high water vapor permeability resistance (sd value 420 m)
- Compatible with PVC and FPO membrane systems

Sarnavap® 3000M
- Thickness 0.40 mm + protective foam 1.00 mm
- High water vapor permeability resistance (sd value 250 m)
- Compatible with PVC and FPO membrane systems
- Ideal for use on concrete substrates

PE / ALUMINUM SELF ADHERED VAPOR BARRIER

- Easy to apply due to self-adhesive property and its specific low weight and increased roll length
- Completely vapor tight PE / Aluminum foil
- Suitable for steel and wood substrates in combination with a mechanically fastened roof buildup
- High tearing resistance under foot traffic makes it ideal for use on profiled metal decks
- Can be used as a temporary waterproofing layer
- Good slip resistance due to ridged surface structure

SIKA PRODUCTS

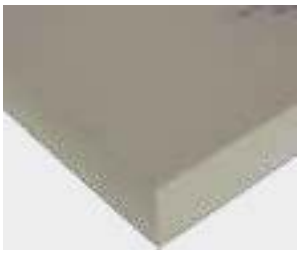
Sarnavap® 5000 E SA
- Thickness 0.60 mm
- Not water vapor permeable due to the aluminum layer
- Compatible with PVC and FPO membrane systems

S-VAP 4000 E SA FR
- Thickness 0.17 mm
- Not water vapor permeable due to the aluminum layer (S value > 1500 m)
- Compatible with mechanically fastened PVC and FPO membrane systems

THERMAL INSULATION

THIS IS ONE OF THE MOST IMPORTANT SYSTEM COMPONENTS in whole roofing structure, providing resistance to cold and heat, keeping the required temperatures inside the buildings and at the same time helping save energy for the heating or cooling. The Sika Roofing range incorporates the most efficient types of thermal insulation available on the market.

PIR/PUR
Thermal insulation boards produced from rigid PU foam with an isocianurate catalyst. This is a very universal and efficient solution of all kinds of exposed roofs. It is also one of the most suitable insulation types for adhered systems, plus it can be also used in different ballasted roof applications.



- Very good fire resistance (more than 250°C)
- Extremely low thermal conductivity value of 0.023 – 0.028 W/m*K
- High compressive strength in the range of 100 – 160 kPa which is also sufficient for some ballasted applications
- Lightweight of 30 – 40 kg/m³

Sika product:
Sarnatherm® PIR, Sikatherm® Sarnapur®, SarnaTherm

STONE WOOL
Thermal insulation boards produced from basalt stone fibres. These are one of the most common solutions for exposed mechanically fastened roofs, especially where very high fire resistance is required.

- Excellent fire resistance (to more than 1000°C), most stone wool products are classified as non-combustible
- Low thermal conductivity value of 0.038 – 0.041 W/m·K
- Compressive strength in the range of 40 to 80 kPa which is sufficient for exposed roofing applications
- Weight is in the range of 100 – 200 kg/m³

Sika product:
Sarnatherm® Mineral Wool, Sikatherm, Sarnaroc®

EPS
Thermal insulation boards produced from expanded polystyrene granules. It is one of most cost efficient solutions for exposed and ballasted roofing systems.

- Most of the products are self-extinguishing in fine
- Low thermal conductivity value of 0.037 – 0.041 W/m·K
- High Compressive strength in the range of 100 – 250 kPa which is also sufficient for some ballasted applications lightweight in the range of 20 – 40 kg/m³

Sika product:
Sarnatherm® EPS, S-Therm EPS

XPS
Thermal insulation boards produced from polystyrene in an extrusion process.
Due to its special characteristics XPS Insulation is the ideal solution for inverted ballasted systems and utility roof decks. It can be also used in exposed roofing systems.

- Almost zero water absorption
- Most XPS products are self-extinguishing in fine
- Very low thermal conductivity value of 0.034 – 0.038 W/m·K
- Very high compressive strength in the range of 250 – 700 kPa which is sufficient for utility decks with high traffic
- Lightweight in the range of 25 – 35 kg/m³

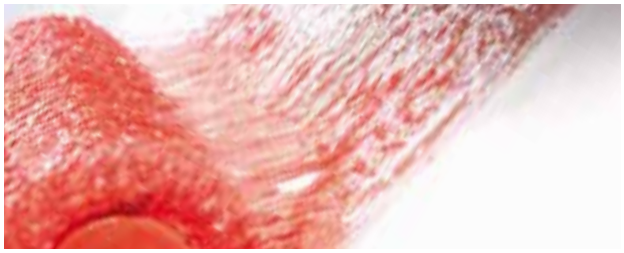
Sika product:
Sarnatherm® XPS, Sikatherm

ADHESIVES

ADHERED ROOFING SYSTEMS are one of the main specialties and focuses of Sika Roofing. Our extensive experience in adhesive technologies has resulted in a wide range of high-performance adhesives covering all of the possible bonding needs in roofing. Sika provides well proven solutions for bonding roofing membranes and thermal insulation to almost any common substrate.

CONTACT ADHESIVES

High quality adhesives designed for bonding membranes to different substrates on roof areas or at upstands, flashings and perimeter termination areas.



- Excellent adhesion properties
- Full compatibility with Sika single ply membranes
- Wide range of adhesives suitable for all different substrates
- Immediate adhesion
- Single component products in the range

Sika products:

- Sarnacol® 2121 Water based and VOC compliant adhesive for Sarnafil® G/S and Sikaplan® PVC membranes
- Sarnacol® 2170 – adhesive for bonding Sarnafil® G 410 and Sarnafil® 410 Felt PVC membranes to roof surfaces and flashings
- Sarnacol® T 660 – adhesive for bonding Sarnafil® TG 66 membranes to flashings
- Sarnacol 2172 Spray adhesive for bonding Sarnafil® G 410 and Sarnafil® 410 Felt PVC membranes to roof surfaces and flashings
- Sika-Trocal® C 733 – adhesive for bonding Sikaplan® PVC membranes to flashings

PU-BASED MEMBRANE ADHESIVES

These are used in fully and partially adhered roofing systems to bond the membranes to various different substrates.

- Excellent adhesion properties
- Full compatibility with Sika single ply felt-backed membranes
- Wide range of adhesives suitable for all different substrates
- Compatible with EPS/XPS insulation
- Bond very well in humid conditions
- Low solvent content
- Single component products – easy to use and handle

Sika products:

- Sarnacol® 2142 S – adhesive for bonding Sarnafil® G 410 Felt and Sarnafil® TG 76 Felt membranes to roof substrates
- Sika-Trocal® C 300 – adhesive for bonding Sikaplan® SGK membranes to roof substrates
- Sarnacol® 2152 2-C PU adhesive for bonding Sarnafil® PVC to concrete

INSULATION ADHESIVES

Specially designed adhesives for bonding different types of thermal insulation to the vapor control layer or to the roof deck.

- Excellent adhesion properties
- Suitable for a wide range of thermal insulation types and different substrates
- Compatible with EPS/XPS insulation
- Bonds very well in humid conditions
- Has a limited foaming effect allowing improved adhesion on rough roof surfaces
- Low solvent content
- Single component products in the range

Sika products:

- Sarnacol® 2162 – Single component and slightly foaming insulation adhesive
- Sikalastic® Coldstick – Two component insulation adhesive used in the SikaRoof® MTC systems.

FASTENERS AND FIXINGS

FASTENERS AND FIXINGS ARE CRUCIAL COMPONENTS, especially in mechanically fastened roof systems. Wind uplift forces and corrosion of the metal are the two most vertical influences that put tough demands on those components of a roofing system.

Sarnafast®

High quality metal fasteners ideally suited for the mechanical fixing of roofing membranes in the main roof areas and in the perimeter zones to various different substrates.

- Excellent corrosion resistance due to special Durocoat® protection coating, includes stainless steel screws in the range
- Suitable for most common substrates (steel, concrete, wood)
- Wide range of lengths
- Compatible with other fixing components (bars, pressure plates, etc.)
- Excellent pull-out values

Sika products:

- Sarnafast® SF 4.8 mm for steel decks. Combined with Washers KT 82 x 40, IF/ IG-C-82 x 40, RT 90, DT 70 x 70, Sarnabar® fastening profiles
- Sarnafast® SBF 6.0 mm – universal screw for concrete, steel and wood deck. Combined with Washers KTL 82 x 40, IF/ IG-C-82 x 40, RTL 90, DTL 70 x 70, Sarnabar® / fastening profiles

WASHERS AND TERMINATION PLATES

There are used in combination with Sarnafast® screws to provide proper mechanical fastening of the membranes or thermal insulation boards.

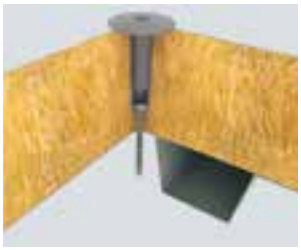
- Corrosion resistance (galvanized)
- Suitable for soft and hard substrates
- Compatible with Sarnafast® fasteners

Sika products:

- Sarnafast® Washers KT, KTL 82 x 40 – for fixing membrane on thermal insulation
- Sarnafast® Washers IF/ IG-C-82 x 40 – for fixing membrane on rigid substrates
- Sarnafast® Washers DT, DTL 70 x 70 – for fixing thermal insulation
- Termination plates RT, RTL 90 for terminations in corner / perimeter areas

TUBE SYSTEM

Polyamide 6 plastic tube elements developed specially for spot and linear fastening of single ply membranes.



- Thermally broken fastening solution of cold bridging
- High quality Polyamide plastic provides resistance to very low temperatures and high pull-out values
- Four spikes on the tube for spot fastening gives improved membrane anchoring
- Compatible with the appropriate Sarnafast® screws and fixing bars

Sika products:

- Sarnafast® Tube SFT – for spot fastening
- Sarnabar® Tube SBT – for linear fastening with Sarnabar® / Fixing bars 6/15

FASTENING PROFILES / Sarnabar®

Metal profiles specially designed for linear and perimeter membrane fastening.

- 2 stiffening ribs and 1.5 mm thick steel provides extraordinary mechanical properties
- Corrosion resistance due to hot dipped galvanized steel
- Compatible with to Sarnafast® screws
- Universal linear distribution of wind forces gives the possibility of wider gaps between fastening rows in the main roof areas and provides the highest security in perimeter zones

Sika products:

- Sarnabar® 6/10
- Sarnabar® 6
- Sarnabar® 6/15 for tube system

LAMINATED METAL SHEETS

LAMINATED METAL SHEETS consist of galvanized sheet metal laminated on the top side with Sikaplan® or Sarnafil® membrane. The lamination has the same properties and compatibility as the roofing membrane sheets. The laminated metal sheets can therefore easily be welded to the waterproofing membranes during installation.

This product creates the widest range of possibilities for flashings and terminations. An extensive variety of different edge profiles can be formed out of these metal sheets.

THE LAMINATION HAS THE SAME PROPERTIES AND COMPATIBILITY AS THE ROOFING MEMBRANE SHEETS

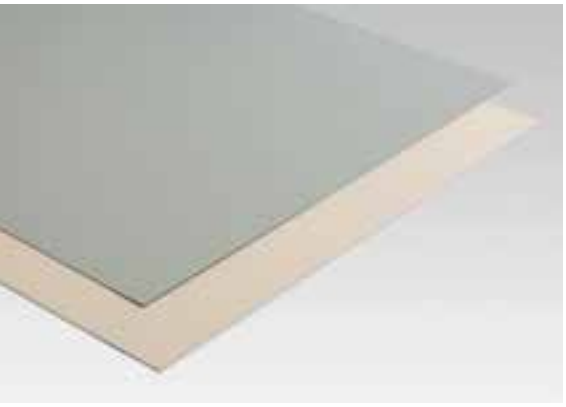
Flashings where these profiles can be used include:

- Parapet details
- Roof edge details
- Connection to skylights
- Connections to walls

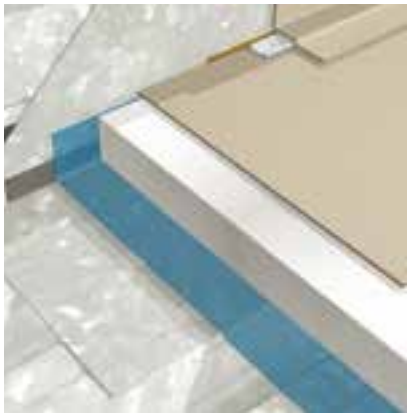
- Fully watertight connections of tailored profiles to the membranes
- Watertight compensation gaps for expansion/contraction of metal which is easily welded over with membrane pieces
- Very high resistance against corrosion due to the additional protection of PVC/FPO laminated top layer
- Edge profiles with the same uniform color as the roof membrane

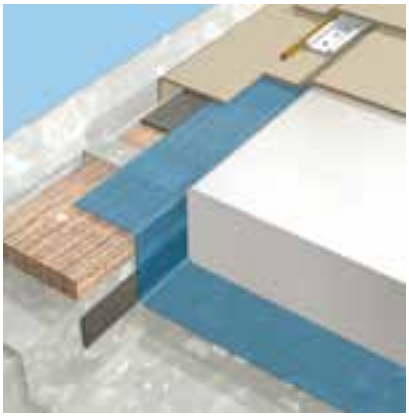
SIKA PRODUCTS:

- Sarnametal® G/S – for roofing systems with single ply PVC membranes Sarnafil® G 410 / 476, S 327;
- Sarnametal® T – for roofing systems with single ply FPO membranes Sarnafil® TG 66 / 76, TS 77 / Sikaplan® TM / TB;
- Sika-Trocal® Metal Type S – for roofing systems with single ply PVC membranes Sikaplan® G / VG / VGW / VGT / VGWT / SGK / S / SGMA



EXAMPLES OF LAMINATED PROFILE USE IN DIFFERENT FLASHINGS





PARAPET FLASHINGS

Profiles of laminated metal are used on the outer edge of the parapet. The profile is fastened mechanically to the structure.

- Membrane is welded on top leaving no fastener penetration exposed
- Profiled edge prevents water going from vertical parapet surfaces into the facade
- Good aesthetics and no need for installation of additional parapet cap – cost effective, good looking solutions

ROOF EDGE FLASHINGS

As with parapet details, the profile is attached mechanically to the structure.

- All profile fastenings are covered with the waterproofing membrane securely welded to the laminated metal
- Easy to install fully watertight solutions
- The profile is made without upstand which allows the free flow of rain water into the gutter

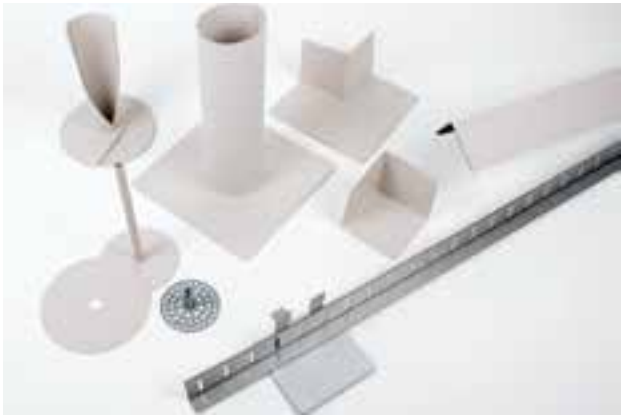
OTHER ACCESSORIES AND ANCILLARY PRODUCTS

MEMBRANE ADHESIVES, CLEANERS AND SEAM PREPARATION AGENTS
A complete, fully compatible range of integral components to support adhered membrane installations, with reliable surface preparation and efficient execution of the welded membrane seams. Sika roofing accessories include the correct primers, adhesives and cleaners for each type of membrane.

SIKA PRODUCTS:
- Sarnacol®, Sika-Trocal® and Sikalastic® Coldstick® adhesive products
- Sarna® and Sika-Trocal® cleaning products
- Sarnafil® T Prep for membrane seam preparation

ADHESIVE SEALANTS
Adhesive sealants are used to waterproof the terminations of roofing membranes at edge flashings and different types of penetration or junctions with other materials.

SIKA PRODUCTS:
- Sikaflex® AT-Connection, Sikaflex® 11 FC, Sikasil N Plus

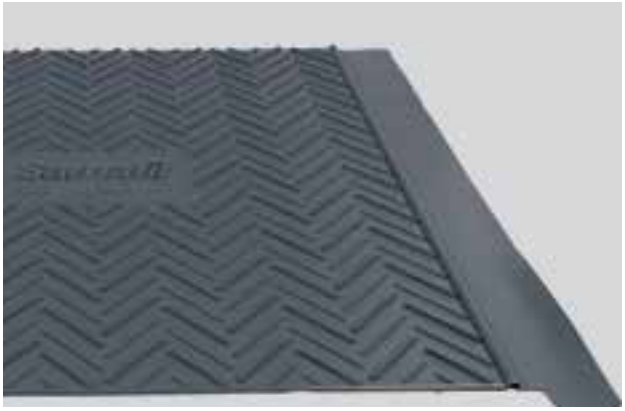


PREFABRICATED PARTS, PIECES AND SECTIONS
Sika produces a wide range of different prefabricated pieces and sections used to allow easier membrane application and installation on different details in the waterproofing system such as terminations, corners, pipe penetrations, etc.

- Corners
- Pipe and post flashings
- Lightning conductors and connections
- Gravel ballast stopends

DRAINAGE PRODUCTS
A large variety of different drains, scuppers, overflows which are fully compatible with the Sika roofing membranes.

- Drains (single and sets)
- Leafguards
- Scuppers
- Overflows

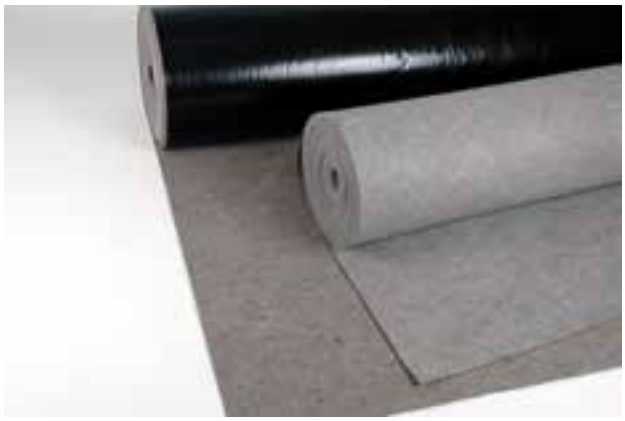


WALKWAYS
These are used in exposed roofing systems to provide pedestrian access – mainly for equipment another maintenance purposes.

SIKA PRODUCTS:
- Walkway pads Sarnafil® PVC
- Walkway pads Sarnafil® T
- Sikaplan® Walkway membrane

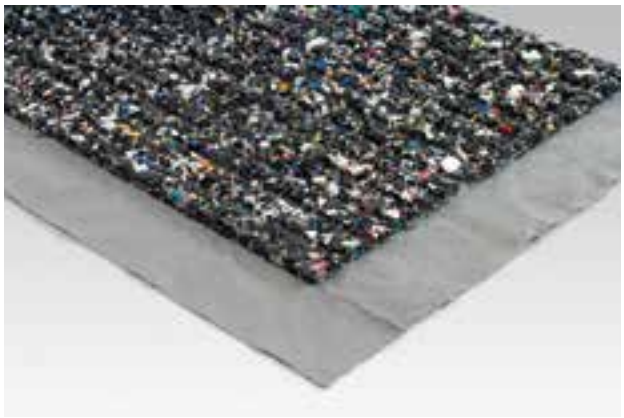
DECOR PROFILES
Decor profiles are used to imitate metal standing seam roofs. They are available in many different colors and in both Sika PVC and FPO membrane products.

SIKA PRODUCTS:
- Sarnafil® G/S Decor Profile
- Sarnafil® T Decor Profile
- Decor Profile SE



PROTECTION, SEPARATION AND LEVELLING LAYERS
Separation layers are placed between non-compatible components in the roof build-up. Protection layers are used to protect the waterproofing membrane from different kinds of damage. Levelling mats are used to smooth out rough or uneven substrates before the membrane is laid.

SIKA PRODUCTS:
- Protection and separation layer felts S-Felt A 300, T 300, GK 400, M 500, S 800
- Protection layer sheets Sarnafil® TG 63, Sarnafil® G 445
- Separation layer fleece S-Glass Fleece 120



DRAINAGE LAYERS
Drainage is used in green roof build-ups for drainage and water retaining functions.

SIKA PRODUCTS:
- Drainage layers Sarnavert® Aquadrain 550
- Drainage Layer 25

DETAILING WITH SINGLE PLY MEMBRANES

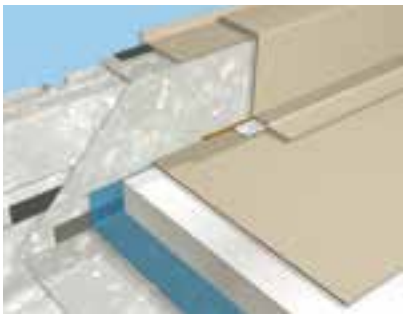
ONE OF THE MOST IMPORTANT KEYS to success in roof waterproofing is the correct design, installation and watertight performance of details, such as the membrane connections to penetration and terminations.

Sika provides a wide range of different detailing accessories and ancillary products including:

- Laminated metal
- Bars and other fixing elements
- Sealants
- Adhesives
- Homogenous membrane sheets
- Prefabricated pieces and sections
- Drainage products

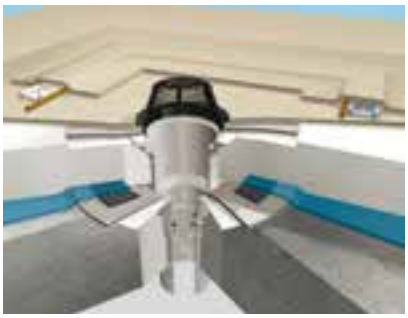
All of which are fully compatible with the flexible Sikaplan® / Sarnafil® membranes, thus ensuring waterproof detailing solutions for almost any connection, penetration and termination – making them as watertight as the membrane itself.

Please refer to the Method Statements and Installation Handbooks for Sikaplan® / Sarnafil® membranes which contain all of the necessary instructions for most of the common details required.



PARAPET TERMINATIONS USING:
- Sika laminated metal profiles
- Sika roof membrane
- Fixing bars and cords

WALL TERMINATIONS USING:
- Sika roof membrane
- Sikaflex® AT Connection Sealant
- Fixing bars and cords



DRAINAGE OUTLETS:
- Sika roof membrane
- Sika drainage set (leaf guard, upper drain unit, lower drain unit) made out of PVC/FPO
- Fixing bars and cords

DETAILING WITH LIQUID APPLIED MEMBRANES

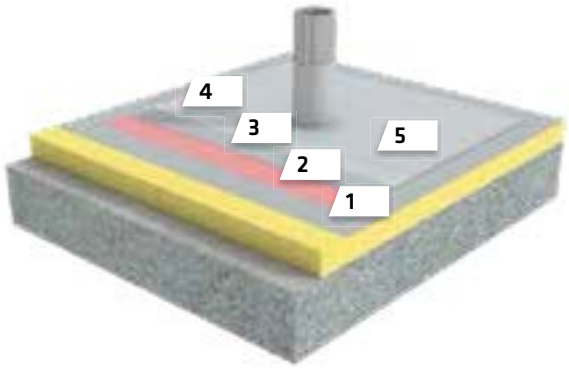
WITH LIQUID APPLIED MEMBRANES, all details can be basically painted over easily to form a seamless waterproofing layer.

Liquid applied Sikalastic® membranes can be used in conjunction with glass reinforcement mats, to provide seamless waterproofing around all different types of detailing at areas including: upstands, plant and equipment entries, or around other roof penetration and components. This type of detailing is very easy to install and ensures durable, long-lasting successful waterproofing to almost any shape or design of upstand (square, T or U shaped metal profiles, etc), many of which would be impossible or much more time consuming with sheets or other materials. Sikalastic® liquid applied membranes can also be used as a detailing solution on Sikaplan® and Sarnafil® single ply membranes. Particularly on complicated details, the use of liquid applied membranes provides many advantages for the applicator.

SYSTEM DESCRIPTION

Detailing on FPO/TPO Membranes
1 Substrate: Sarnafil®-TPO/FPO Membrane
Cleaner: Sarna® Cleaner
2 Primer: Sikalastic® Primer FPO (70 – 140 ml/m²)
3 1st coat: Sikalastic®-621 TC or Sikalastic®-641 (≥ 1l/m²)
4 Reinforcement: Sika® Reemat Premium
5 2nd coat: Sikalastic®-621 TC or Sikalastic®-641 (≥ 1l/m²)

Detailing on PVC Membranes
1 Substrate: Sarnafil® or Sikaplan®-PVC Membrane
Cleaner: Sarna® Cleaner
2 Primer: Sikalastic® Primer PVC (70 – 140 ml/m²)
3 1st coat: Sikalastic®-621 TC or Sikalastic®-641 (≥ 1l/m²)
4 Reinforcement: Sika® Reemat Premium
5 2nd coat: Sikalastic®-621 TC or Sikalastic®-641 (≥ 1l/m²)



SERVICES AND SUPPORT IN ROOFING

SIKA IS A PROVEN AND RELIABLE PARTNER to the whole building and construction industry. Worldwide we provide our customers far more than just the best 'state of the art' and technically proven waterproofing materials. We also assist and add value for our customers, by providing many more support services for our products and their installation.

WIND LOAD CALCULATIONS
Our specially developed "Jet Stream" computer software is used to design mechanical fastening systems for our clients and their designers. This 'state of the art' software now includes most national standards and regulations. It is an extremely efficient and practical tool for producing the most effective fixing solutions including a detailed layout and Method Statements, with all of the necessary information for contractors to estimate and carry out the works on site. It can also contribute to significant savings in the roof build-up and your overall construction costs.

ROOF SURVEY AND ASSESSMENTS FOR REFURBISHMENT SPECIFICATIONS AND DETAILS
Sika roofing engineers can advise and assist with the production of the necessary survey and assessment work required for roof refurbishment projects. This provides customized roof re-waterproofing specifications which also include detailing solutions and Method Statements, etc.

SIKA INSTALLATION EQUIPMENT
Equipment which is specifically developed for installation of Sika roofing systems includes:

- Welding machines
- Sika membrane slitter
- Sikalastic® application tools

SIKA PROVIDES AN EXTENSIVE SUPPORT and service for each of our roofing product lines. This is tailored to each system and in each product line it covers all stages in the design, planning and execution of membrane roof waterproofing, from the roof condition survey or requirements analysis, through full documentation, to expert training and support on site throughout the installation – anywhere in the world.

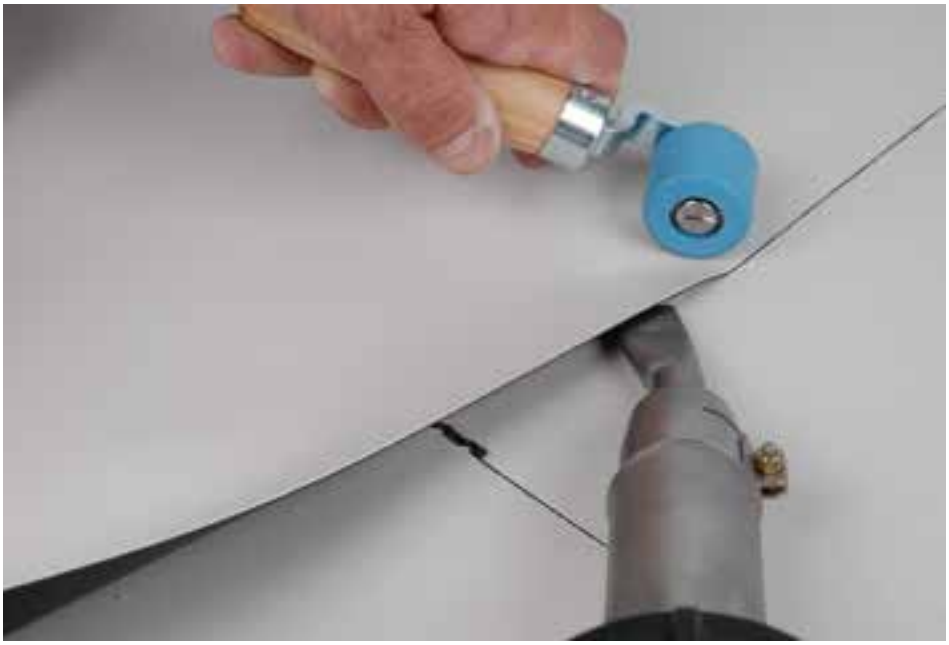
CAD DETAILS, BIM OBJECTS, TECHNICAL DOCUMENTATION
A wide range of CAD drawings, BIM objects, installation guidelines, Method Statements, Product Data Sheets and considerable additional technical documentation, approvals and certificates are available for Sika roofing membranes and systems.

GUARANTEES
Guarantees are provided to fulfil our different client's needs and demands. Comprehensive warranties for watertightness and compatibility with other building materials are issued individually for each project in accordance with all relevant local regulations.

TECHNICAL AND PRODUCT APPLICATION TRAINING
The many different applications for Sika waterproofing systems require different installation techniques and detailing solutions. The theoretical and practical, technical and application training courses run by Sika roofing engineers also help to ensure the security and durability of the installation.

WELDING PROCEDURES – SINGLE PLY MEMBRANES

IN EVERY ROOFING SYSTEM being installed, the Sika PVC and FPO single ply membranes must always be securely welded together with special welding equipment using hot air. The following methods are used for welding – hand welding and automatic welding.



MANUAL / HAND WELDING
Manual hot air welding creates a secure watertight membrane, particularly around complex or difficult details where access for automatic machine welding is not possible.

Manual hot air welding is carried out in three stages:

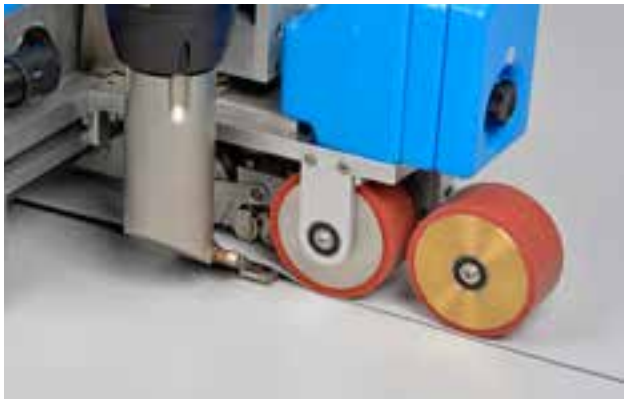
- Spot tacking the membrane sheets in overlaps to prevent the membrane sheets from moving during the welding process
- Welding of the rear seam to prevent any migration of hot air during the main welding operation
- Main welding of the front seam

When welding Sika FPO membranes additional preparation of the seam area is required (using Sarnafil® T Prep).

Equipment and tools:

- Welder Leister Triac PID
- 20 and 40 mm nozzles
- Silicon and teflon pressure rollers

(please refer to the respective Sika membrane application manuals and Method Statements for details of all of the specific equipment and tools required).



AUTOMATIC WELDING
Automatic welding equipment is used to weld membrane seams safely and efficiently, with high quality and reliability, particularly on large flat areas. The welding and equipment parameters always need to be adapted to the site conditions. The welding machines developed for use with Sika membranes allow adjustment to suit almost any weather conditions, including high humidity or for welding in the wet and in very cold weather, even at temperatures below 0°C.

Equipment:
- Sarnamatic® 681
- Leister Varimat

SEAM CONTROL
Every seam that is welded manually or automatically must be checked and tested when welding is finished to confirm its integrity and high quality workmanship. If there are any voids or misses, then the seam has to be made good by additional manual welding.

Sika provides detailed guidelines for installing all of our membrane roofs. These include Method Statements and Application Manuals which contain full information regarding all of the installation methods and the correct execution of details, such as those at terminations and upstands, etc. They also include our recommendations and useful checklists for site safety and quality control procedures.

APPLICATION PROCEDURES – SINGLE PLY MEMBRANES

APPLICATION OF MECHANICALLY FASTENED SINGLE PLY MEMBRANE SYSTEMS

SIKA SINGLE PLY MEMBRANES are mechanically fastened to the roof deck against wind uplift forces, using single fasteners or fastening bars with their fixings drilled into the deck or into the support structure according to the engineers' requirements.

INDUCTION WELDING

This innovative fastening system relies on electromagnetic induction welding to eliminate any fastener penetration through polymeric roof waterproofing membranes – both FPO and TPO. Special coated metal plates are fastened through the roof assembly into the deck and later heat-welded to the underside of the membrane by using an induction welding tool. The plates are fastened in a regular pattern into the roofing deck before laying the membrane. This allows easy location of the plates after unrolling the membrane, and ensures even load distribution after the induction welding is completed.

SYSTEM COMPONENTS

- Induction welding tool from approved suppliers
- Coated metal plates for FPO and TPO membranes
- Range of fixings tubes and fasteners for different substrates

ADVANTAGES

- Quick and easy to install
- No membrane fastener penetration
- Even wind load distribution
- Enhanced wind-uplift resistance
- Reduced membrane 'flutter'
- Elimination of half sheets in perimeter and corner areas

SPOT FASTENING

In spot fastening systems the membranes are fixed using steel screws (Sarnafast® 4.8 or 6.0 mm in diameter) with pressure plates or plastic tubes anchored into the deck.

Adjacent membrane sheets are overlapped and the seams are hot air welded. This can be an efficient solution that allows very fast, cost effective installation.

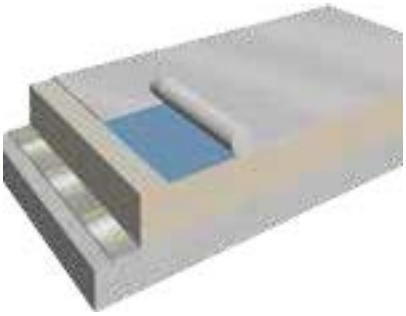
LINEAR (Sarnabar®) FASTENING

In the Sarnabar® system (fastening bars), the sheets are loose laid and secured using the fastening bars anchored to the deck. The bars are then covered with additional strips of the same membrane and welded to the waterproofing layer. This system provides high resistance to wind uplift because loads are transferred through the fastening bars to the supporting roof structure.

INSTALLATION OF ADHERED SYSTEMS

SIKA SINGLE PLY MEMBRANES are attached to the thermal insulation or roof deck by using either an on-sight applied liquid adhesive or with a factory-manufactured adhesive backing on the membranes. There are three main application methods.

FULLY ADHERED



The membrane is adhered to the full surface of the substrate, giving the highest quality of aesthetic appearance. This type of application can be carried out in 2 ways:

- Contact adhered with non-felt backed membranes
- Wet-bed adhered with felt backed membranes

Contact adhered:

- Sarnacol® 2170 is applied to both surfaces, the membrane and substrate
- Instant adhesion takes place when the two surfaces come into contact

Wet-bed adhered:

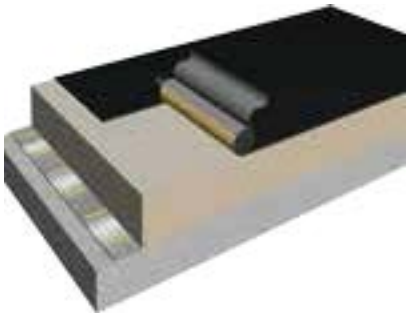
- Sarnacol® 2142 S is applied to the substrate only
- Immediately roll out the felt backed membrane over the wet adhesive bed

PARTIALLY ADHERED

The partially adhered system is used with felt backed membranes and Sika-Trocal® C 300 adhesive, ideally suited for use on large industrial roofs. For very large roofs an adhesive application trolley cart is another practical Sika innovation.

- Liquid Sika-Trocal® C 300 adhesive is applied directly from the tin onto the substrate in strips
- A fine mist of water is sprayed over the adhesive to start the curing process
- The adhesive strips are then spread out to a thin film with a squeegee
- The membrane is unrolled and immediately pressed firmly into the wet adhesive film

SELF ADHERED



Self adhered membranes have a factory manufactured adhesive film on the back side of the membrane which is rolled out and bonded directly to the substrate when its release liner is removed.

- A Primer can be required on difficult substrates
- The membrane with self adhesive backing is unrolled and properly positioned
- The protective film on the adhesive is removed and at the same time the membrane is pressed firmly on to the substrate
- Instant adhesion takes place, no adjustment is possible after application

APPLICATION PROCEDURES – LIQUID APPLIED MEMBRANES

Sika provides detailed guidelines for installing all of our liquid applied membrane systems. These include Method Statements and Application Manuals which contain full information regarding all the installation methods and the correct execution of details, such as those at terminations and upstands, etc. They also include our recommendations and useful checklists for site safety and quality control procedures.

ROLLER APPLICATION

The application is done in several stages: first the base coat of liquid membrane is applied directly on the prepared / cleaned substrate. Then the reinforcement material (e.g. Sikalastic® Reemat) is rolled out and embedded into the wet base coat.

After the first coat is cured the top coat of liquid membrane is applied over it.

Tools & equipment:

- Rollers and brushes

1-C AIRLESS SPRAY APPLICATION

In addition to roller application the one-component PU liquid applied membranes can also be applied with airless spray equipment. This method is used for application on metal and fibre cement roofs, as well as for top coat application in other Sikalastic® waterproofing systems.

Equipment:
The spray equipment should have the following capabilities:
- Min. pressure: 220 bar
- Min. output: 5.1 l/min
- Min. ø nozzle: 0.83 mm (0.033 inch)

For example:
Wagner Heavycoat HC 940 E SSP Spraypack

TROLLEY CART APPLICATION

To speed up the application of one-component liquid membrane applications on large areas, a special tool – the Sikalastic® Applicator has been developed. By using this innovative Sika equipment, roofing contractors can significantly increase their rate of application and reduce costs on large open roof spaces. The liquid is put into the Sikalastic® Applicator and as it is moved along the roof surface, the liquid applied membrane is poured in lines along the surface. The material is than spread with roller application, followed by embedment of the reinforcement into the base coat.

Equipment:
- Sikalastic® Applicator

HOT SPRAYED 2-C PU MACHINE (SPRAY) APPLICATION

Two-component spray applied liquid membrane systems require special equipment and comprehensive know how about machine settings. The material is usually heated up to a temperature between 70 – 80°C and pumped with 160 – 200 bar pressure into the mixing chamber of the application gun where component A + B are mixed and immediately sprayed onto the surface. It cures within seconds and create a uniform waterproofing membrane. The application with two-component hot spray equipment is very efficient for large surface application. The fast curing of the applied membrane allows overcoating or pedestrian traffic on the same day.

Equipment:
Suitable spray machienes are for example:
- Graco E XP-2
- Gamma Evolution G 50 H
- Wiwa PU 460

ALSO AVAILABLE FROM SIKA

FOR MORE SIKA ROOFING INFORMATION:

WE ARE SIKA
Sika is a specialty chemicals company with a leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing and protecting in the building sector and the motor vehicle industry. Sika's product lines feature concrete admixtures, mortars, sealants and adhesives, structural strengthening systems, industrial flooring as well as roofing and waterproofing systems.

Our most current General Sales Conditions shall apply. Please consult the most current local Product Data Sheet prior to any use.

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