

SikaProof® A

Technology & Systems



Innovation & Consistency | since 1910



The fully bonded waterproofing system –

Keep your basements durably and securely watertight!

- **What is SikaProof® A?**
- **How does it work?**
- **Where can it be used?**
- **What are the advantages of SikaProof® A?**
- **How should it be installed?**
- **SikaProof® A system components**
- **Additional Sika waterproofing systems**



Ground slab

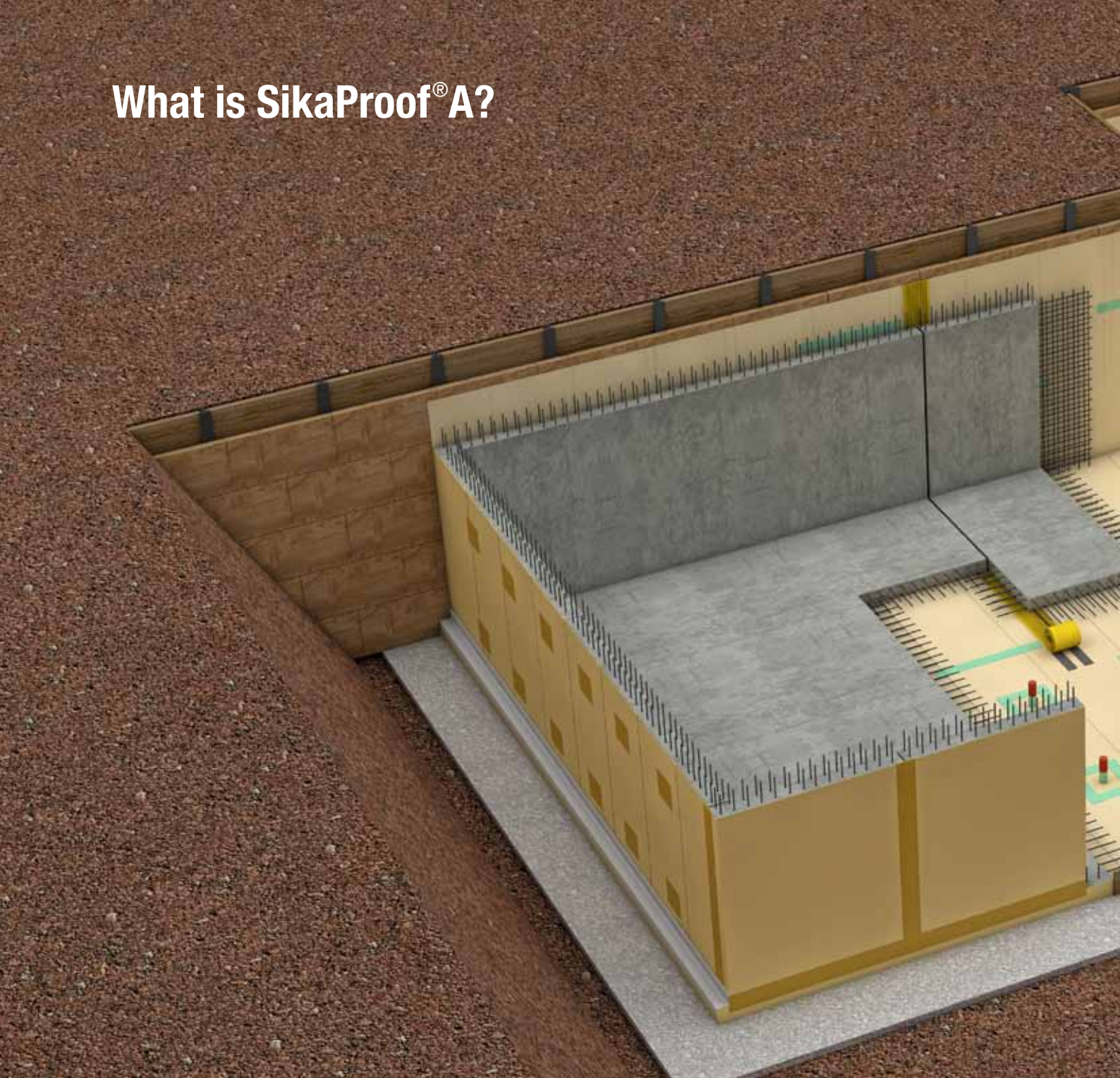


Walls, single or double faced formwork



Pre-fabricated elements

What is SikaProof® A?

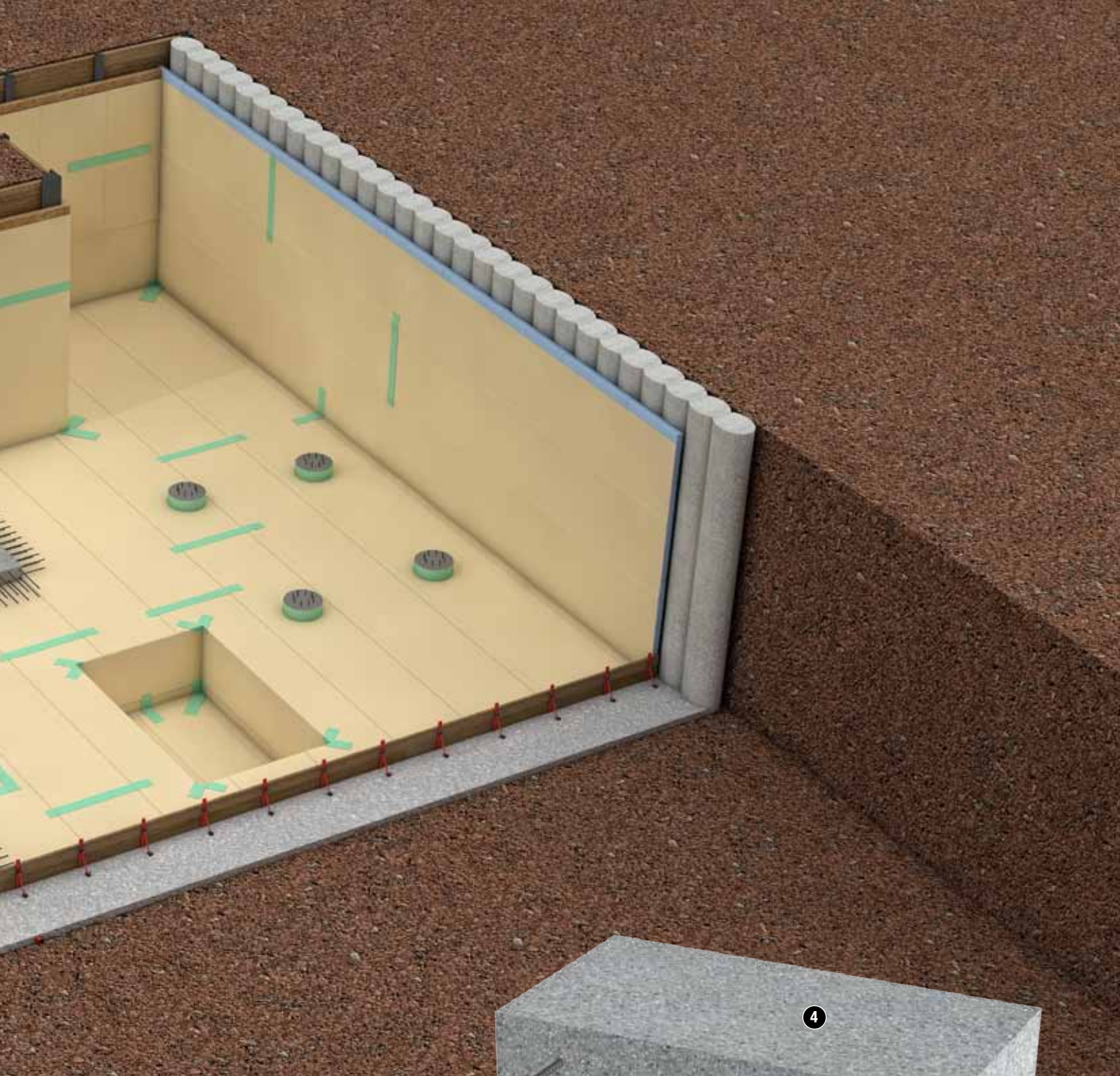


An innovative waterproofing system that will simplify your way of working!

SikaProof® A is a pre-applied sheet membrane waterproofing system consisting of an embossed, highly flexible polyolefin membrane, with a special grid pattern of sealant and a specially designed non-woven fleece. This unique system build-up creates a full and durable mechanical bond effect, which is created when the fleece is completely embedded in the fresh concrete. In addition, the sealant prevents any lateral water underflow or migration between the **SikaProof® A** membrane system and the structural concrete.

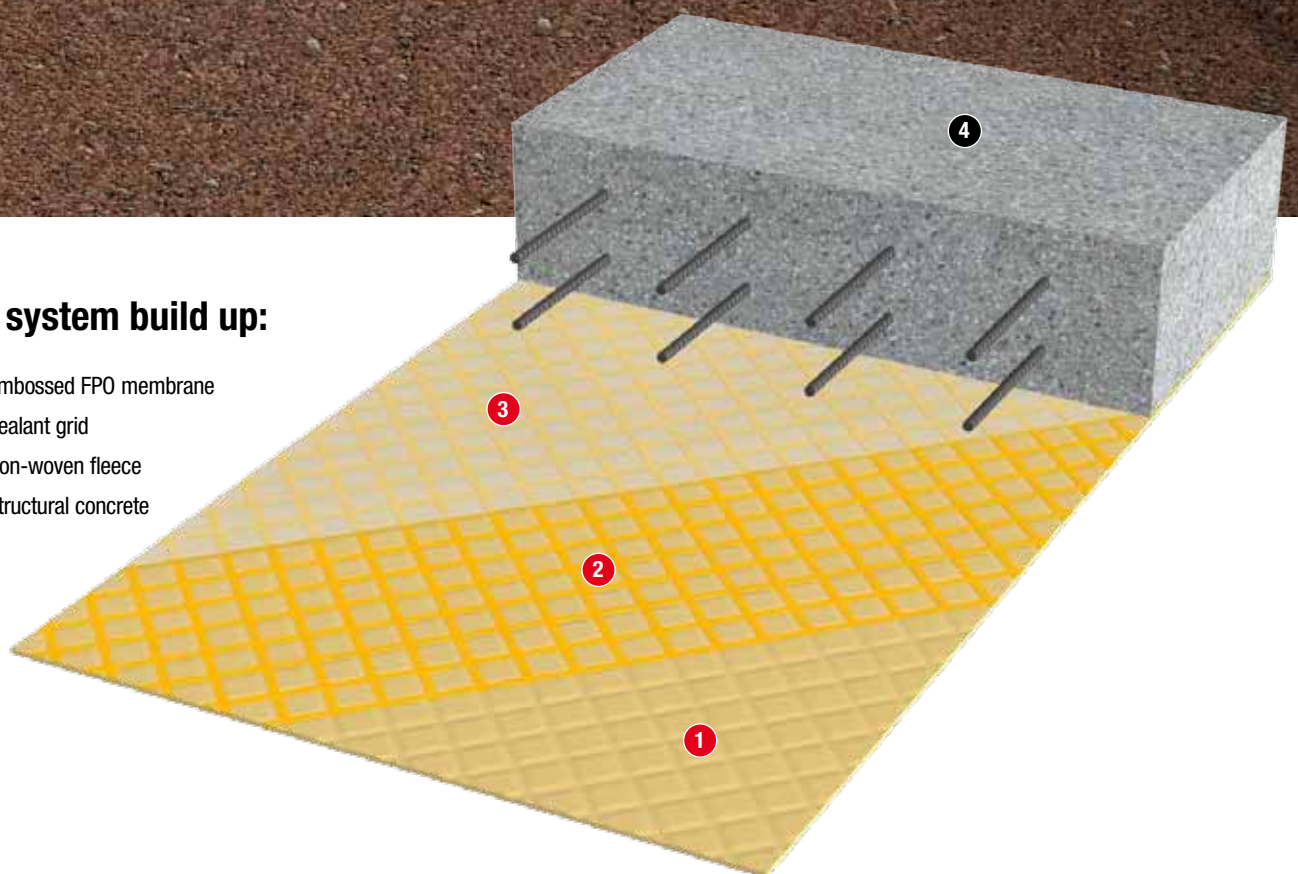
The **SikaProof® A** system is applied easily before the reinforcement is installed and the concrete is poured. Joints are sealed by special adhesive tapes.

This system is typically used for the waterproofing, damp-proofing and concrete protection of concrete basements – particularly for new constructions but also for extensions, some remedial works and pre-fabricated constructions.



The system build up:

- ① Embossed FPO membrane
- ② Sealant grid
- ③ Non-woven fleece
- ④ Structural concrete

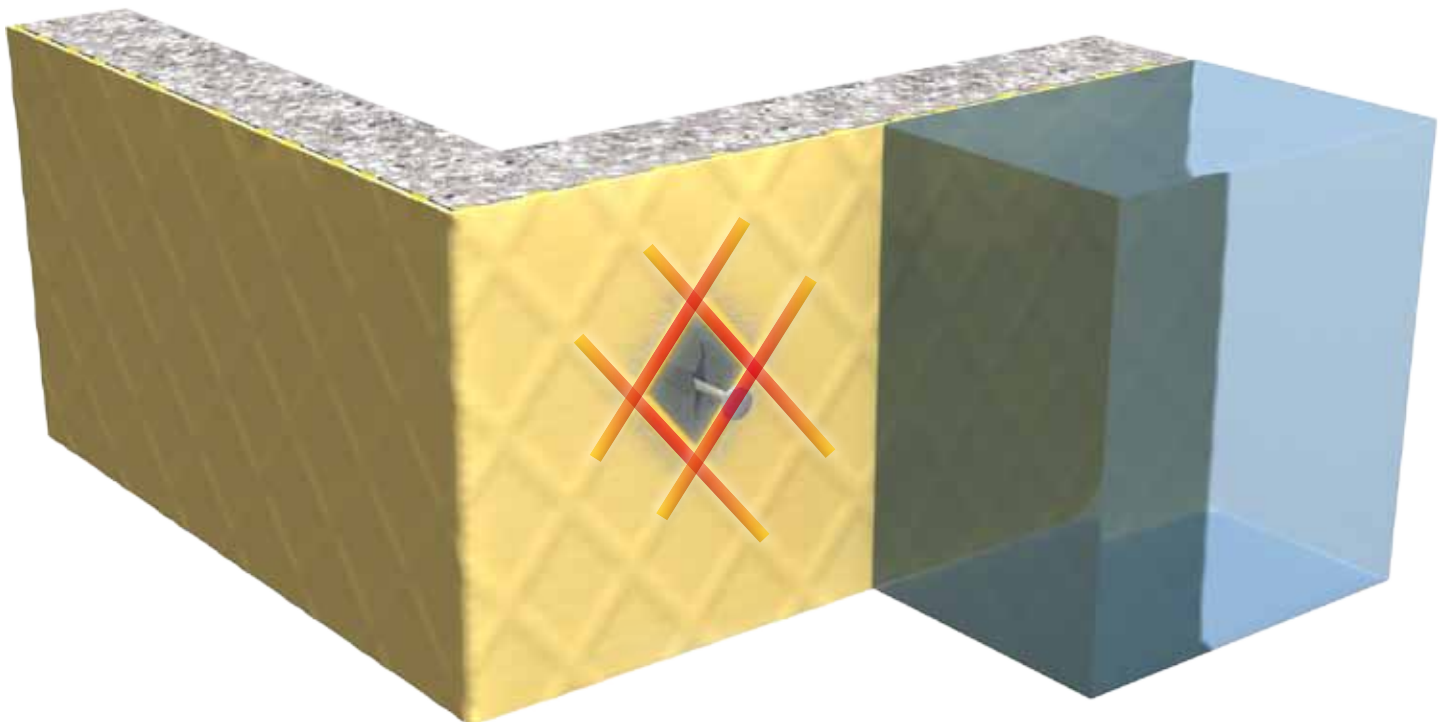


How does it work?

Fully bonded to the concrete with Sika Grid Seal Technology

SikaProof® A is an innovative system that prevents any lateral water underflow and migration between the waterproofing membrane and the structural concrete.

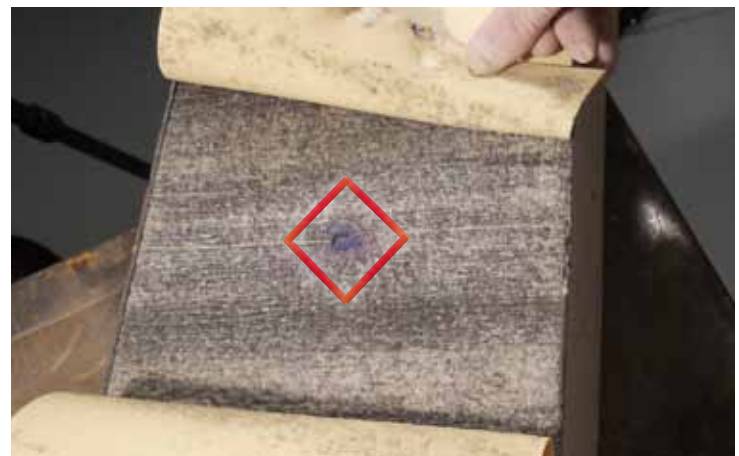
Sika Grid Seal Technology is the core of **SikaProof® A**. It consists of a special sealant that is factory applied in a grid-pattern, which creates “mini watertight compartments”. This sealant grid seals and blocks any lateral water underflow, even in the event of any local damage to the membrane. The sealant grid itself is also protected by the specially designed fleece that is laminated into the grid sealant. This fleece is also embedded completely into the fresh concrete and creates a full and durable mechanical bond between the FPO membrane layer of **SikaProof® A** and the cured concrete.



Tested and approved

The **SikaProof® A** waterproofing system has been tested in accordance with standards and is CE certified for European markets. All the necessary detailing solutions including movement and construction joints, pipe penetrations, pile cap-head connections, etc. have also been tested and approved for these special requirements. This testing includes:

- ASTM D 5385
- CE certification accordance with EN 13967
- Additional function tests for detail solutions



No lateral water migration in the ASTM testing



Bonding and sealing of SikaProof® A membrane joints

The **SikaProof® A** membranes are easily joined and connected to each other using SikaProof adhesive strips and tapes. There are no welding procedures required on-site, plus no special tools, heating or open flames are required either. This ensures not only that the installation is fast and efficient, but also secure.

The **SikaProof® A** membrane has a self-adhesive strip on one side, in a longitudinal direction, that allows simple adhering of the overlaps. For adhering of detailing and transverse / cross joints, specially designed tapes are used. The installation of the **SikaProof® A** waterproofing system with these strips and tapes reduces time and hence overall cost.

SikaProof tapes for membrane jointing and detailing:

- **SikaProof® Tape -150** (internally applied)
- **SikaProof® ExTape -150** (externally applied)

All recommended jointing and detailing solutions using **SikaProof® Tape -150** and **SikaProof® ExTape -150** are tested to be watertight up to a certain level of water pressure.



Internal jointing detail with **SikaProof® Tape -150**.



Finished internal jointing detail

Where can it be used?

SikaProof® A can generally be used to waterproof all types of reinforced concrete basements and other below ground structures. Typical projects are residential and industrial buildings such as residential housing, commercial, retail and public buildings, stadiums and leisure facilities, industrial and manufacturing plants and warehouses etc. Engineered structures i.e. retaining walls, tunnel galleries, potable water tanks, waste water storage and treatment structures and tanks etc.

can also be waterproofed externally with the **SikaProof® A** system. For these projects **SikaProof® A** can be used in different ground conditions including various levels of groundwater from damp soil, to percolating water or water under hydrostatic pressure. Additionally it can be exposed to different levels of other aggressive influences.

General applications

Damp proofing

Against

- Rising humidity through capillary effect
- Percolating water, for flat slab foundations (slab on grad), column footings, strip foundations and walls.



Concrete protection

Protection against

- Various gases such as radon and methane
- Different types of chemicals in solution (sulphate, chloride, etc.)
- Humic acid for all types of construction elements.



Waterproofing

Resistant to

- Water under hydrostatic pressure
- No lateral water underflow and migration for deep, one or multi storey basements.





Construction elements

Base slabs

For special details, such as pits, pipe penetrations or pile heads etc. approved solutions are provided for the **SikaProof® A** system. Installation is easy and fast, using the flexible FPO membrane in 2.0 m width in the horizontal area.



Walls, single and double face formwork

The self-adhesive strips and tapes allow an easy and secure bonding and sealing of the **SikaProof® A** membrane system in the vertical area. There are approved solutions available for special details, such as for the shuttering anchors of double face formworks. The installation in vertical areas is mainly done using the 1.0 m width rolls in a vertical direction.



Prefabricated elements

The advantages of precast elements can be further improved by installing a waterproofing membrane system in the prefabrication process.

The **SikaProof® A** membrane can be easily installed in the factory. On site the waterproofed elements enable a fast fitting, reducing installation time and costs.



What are the advantages of SikaProof® A?

The **SikaProof® A** membrane system has specific advantages compared to traditional waterproofing solutions. It provides very specific benefits for all parties involved on a project: Owners, Specifiers and Contractors.



Advantages for Owners and Investors

Durable functionality (dry basement), cost efficiency and high resistance against specific conditions are key issues for Owners and Investors. **SikaProof® A** membrane system is based on a well proven membrane used since the early 1990's in tunnel waterproofing. With this long-term experience of material performance under harsh conditions, **SikaProof® A** delivers long life expectancy, even in aggressive conditions such as sea-water soil with a high sulphate content or humic and other soil acids.

Advantages for Design Engineers/Specifiers

The highly effective mechanical and chemical performance of **SikaProof® A** is approved in accordance with European and American standards. Rigorously tested detailing solutions for joints, penetrations, etc. provide the safety required by Design Engineers and Specifiers. This allows them to use the **SikaProof® A** system on a variety of projects with different waterproofing requirements.

Advantages for Contractors

Due to the quick and simple jointing of the membranes with self-adhesive strips and tapes, **SikaProof® A** is a very user-friendly waterproofing system that is fast and secure to install. Compared to traditional waterproofing solutions, it requires no additional investments in special tools or equipment, no heating or open flames and no actions for protecting the membrane system. All this results in time and cost savings on site which are key elements in reducing overall project costs.

Advantages

Performance

- No lateral water migration in the event of damage
- Resistant to aggressive mediums in soil
- Provides protection against radon gas

Tested and approved

- According to American and European Standards
- Complete system testing (incl. details and joints)
- Highly resistant to ageing

Total cost efficiency

- Fast installation: lay out, jointing, detailing-finished
- Reduced membrane joints with 2 m wide rolls
- No additional protection screed required

Easy and secure installation

- No welding, no open flames, no priming
- Simple adhered joints and details
- No special tools or equipment required

High quality

- Prefabricated – define minimum layer thickness
- High flexible membrane system
- Long-term experience with FPO membrane

Sustainability

- Less waste, no overall release liner
- Highly durable with long life expectancy
- No segregation, wash-out or leaching



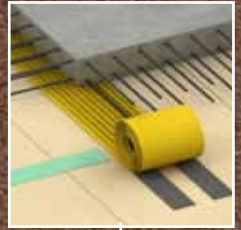
How should it be installed?

For successful waterproofing with the **SikaProof® A** system, the Owner's detailed requirements have to be taken into consideration to select the appropriate SikaProof System in the early stages of the project design phase. For efficient installation during the construction phase on-site a defined procedure and schedule of the works has to be prepared. Details, such as penetrations, pile heads, joints and corners, etc. have to be planned and installed carefully according to Sika's installation procedure.

Walls, double formwork



Expansion joints



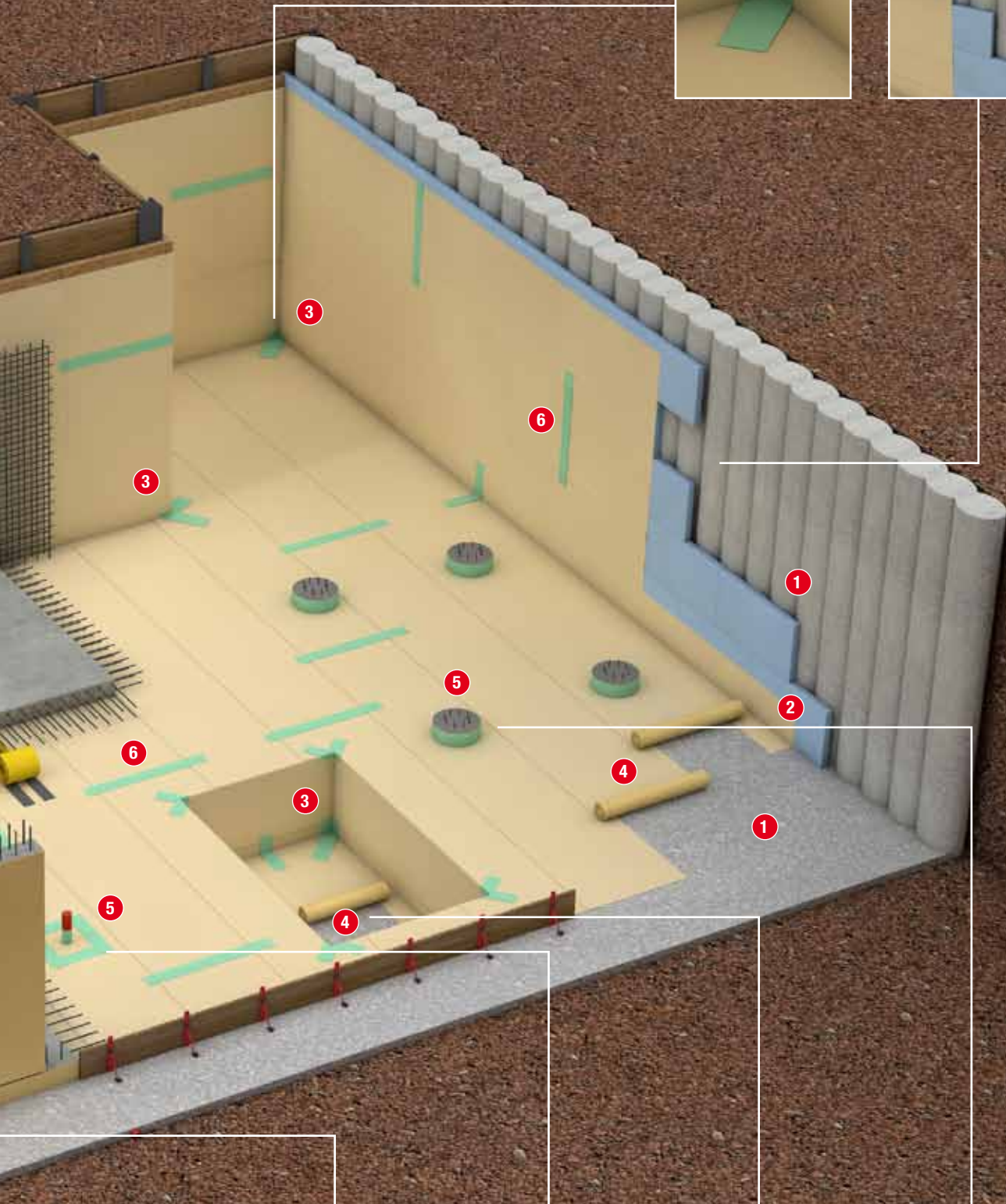
Installation Procedure:

- ① Substrate preparation
- ② Install the perimeter with the preformed **SikaProof® A Edge**
- ③ Form the corners with the **SikaProof® A Edge** sheet
- ④ Lay out the **SikaProof® A** membrane sheets on the surface
- ⑤ Prepare all joint connections and details
- ⑥ Adhere all joints and connections with **SikaProof® Tape-150** and **SikaProof® ExTape-150**
- ⑦ Reinforcement and concrete work
- ⑧ Additional sealing of external joints and penetrations with **SikaProof® Patch-200** or **Sikadur® Combiflex**

Corner details



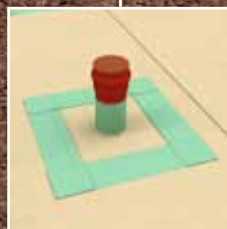
Walls, single formwork



Construction joints



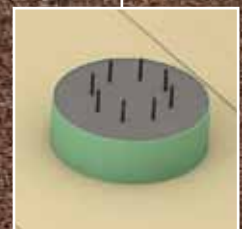
Construction joints



Pipe penetrations



Lift shafts



Pile heads

SikaProof® A system components

SikaProof® A system consisting of a range of membranes in various thicknesses and widths, special adhesive tapes for bonding and sealing joints and accessories for special detailing solutions.

SikaProof® A membranes in 1.0 and 2.0 m width

■ SikaProof® A-05

0.5 mm thick membrane, for damp-proofing, concrete protection and waterproofing with low stress and pressure requirements.

■ SikaProof® A-08

0.8 mm thick membrane, for waterproofing and concrete protection with medium stress and pressure requirements.

■ SikaProof® A-12

1.2 mm thick membrane, for waterproofing and concrete protection with medium to high stress and water pressure requirements.



SikaProof® A membranes, 1.0 and 2.0 m width

SikaProof® A tapes for joints and detailing

■ SikaProof® Tape-150

self-adhesive tape in 150 mm width for internal sealing and jointing of all detailing and transverse / cross joints

■ SikaProof® ExTape-150

self-adhesive tape in 150 mm width for external jointing with split release liner for easier application



SikaProof® Tape-150



SikaProof® ExTape-150

SikaProof® A accessories

■ SikaProof® A -05/-08/-12 Edge

prefabricated L-shaped edge membranes in 1 m width for fast installation of edges and corners on site.

■ SikaProof® Patch-200

externally applied self-adhesive membrane patches for additional post-construction sealing of joints, penetrations or damage to the membrane



SikaProof® A -05/-08/-12 Edge



SikaProof® Patch-200

■ SikaProof® MetalSheet

laminated metal sheet for sealing around pile cap / head penetrations

■ SikaProof® FixTape-50

tape strip for temporary fixation and for internal repair of local damage.



SikaProof® MetalSheet



SikaProof® FixTape-50

Additional Sika waterproofing systems

In addition to the **SikaProof® A** system, there are many additional products and systems that can be used for specific waterproofing requirements and conditions.

Sika also provides a complete range of joint sealing solutions for watertight concrete construction including waterstops for construction and

movement joints, hydrophilic profiles and injection hoses for construction joints, plus adhesive sealing tapes for use in both construction and movement joints. All the Sika watertight joint sealing solutions are fully compatible with one another and can therefore be used with the **SikaProof® A** system – for a totally secure and watertight basement.

■ Sika® Waterbars

Externally and integrally installed, preformed PVC and FPO waterstops for making both construction and movement joints watertight in reinforced concrete structures.

Externally applied waterstops are fixed directly onto the **SikaProof® A** membrane with the **SikaProof® FixTape-50**.



■ Sikadur-Combiflex® SG System

An adhesive tape system for watertight sealing of many different types of difficult and uneven sized construction or movement joints.

Sikadur-Combiflex® SG system is fully compatible with the **SikaProof® A** membrane system and can be used to seal external joints between precast elements with pre-applied **SikaProof® A** membrane or to seal transitions of base slab and precast wall elements.



■ SikaSwell® A Profiles

High-performance, hydrophilic, swelling profiles for sealing construction joints. **SikaProof® A** profiles can also be used in combination with the **SikaProof® A** system as an additional back-up solution around complex penetrations, for example pipe / service entries.



■ **SikaFuko®** hoses and **Sika® Injection** materials Re-injectable injection hoses and injection materials including micro-cement, acrylic and epoxy resin systems for sealing construction joints. These re-injectable hoses can also be used in combination with the **SikaProof® A** system as a controllable back-up solution, for example where future settlement is anticipated.



Sika – a Global Player in Specialty Chemicals for Construction and Industry



- 5 continents
- Over 70 countries
- 90 production and marketing companies
- Approx. 12,900 employees

Sika is a leading Swiss company, globally active in specialty chemicals. Our local presence worldwide links us directly with customers and ensures the success of Sika and its partners. Every day highly motivated people strive to provide the best customer service.

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