

# PRODUCT DATA SHEET

## SikaProof® A-12

FULLY BONDED, PRE-APPLIED FPO SHEET MEMBRANE WATERPROOFING SYSTEM FOR BASEMENTS AND OTHER BELOW GROUND STRUCTURES



### DESCRIPTION

SikaProof® A-12 is a fully bonded, composite sheet membrane waterproofing system for reinforced concrete structures. It consists of an embossed polyolefin (FPO) based membrane laminated with a unique sealant and a non-woven fleece with a self-adhesive strip on the longitudinal side for the overlap. SikaProof® A-12 is cold-applied and pre-applied, as it is installed without heat or open-flames, and before the steel reinforcement is fixed and the concrete is poured.

### USES

SikaProof® A-12 may only be used by experienced professionals.

Damp-proofing, waterproofing and concrete protection for basements and other below ground concrete structures against ground water ingress. Suitable for use on:

- Below ground reinforced concrete slabs
- On reinforced concrete walls with both single and double -faced formwork
- Extensions and reconstruction works
- Prefabricated structures

### CHARACTERISTICS / ADVANTAGES

- Pre-applied, before the reinforcement is fixed and the concrete is poured
- Fully and mechanically bonded to the reinforced concrete structure
- No lateral water underflow between the concrete structure and the membrane system
- High watertightness tested according to various standards
- Easy to install with fully adhered joints (no welding required)
- Cold-applied (no pre-heating or open flames)
- Temporarily resistant to weathering and UV-light during construction
- Resistant to aging

- High flexibility and crack-bridging abilities
- Resistant to aggressive mediums in natural ground water and soil
- Can be combined with other approved Sika Waterproofing / Joint Sealing Systems

### APPROVALS / STANDARDS

- Flexible sheets for waterproofing - 'Plastic and rubber damp proof sheets including plastic and rubber basement tanking sheet' according to EN 13967:2012, Declaration of Performance No. 0207041030000000031193, certified by notified factory production control certification body 1213, certificate of conformity of the factory production control 1213-CPR-065, and provided with the CE marking.
- German abP "allgemeines bauaufsichtliches Prüfzeugnis", MPA NRW, approval No. P-22-MPAN-RW-8945-2
- Function test especially for standard details, as penetrations and pile caps, Wissbau, according German standards, test report No. 2010-212-6 /-7
- BBA technical approval for construction, Certificate No. 13/5075
- BRE Environmental Product Declaration, according to EN 15804, BREG EN EPD No. 000109
- Cahier des Charges, French technical approval CCT 57
- BRANZ appraisal, New Zealand, No. 852

## PRODUCT INFORMATION

<b>Chemical Base</b>	Membrane Layer Sealant grid Fleece layer	Flexible Polyolefin (FPO) Polyolefin (PO) Polypropylene (PP)
<b>Packaging</b>	SikaProof® A-12 rolls are wrapped individually in a yellow PE-foil. Roll width: 1m and 2m Roll length: 20m	
<b>Appearance / Colour</b>	Light yellow sheet membrane, laminated with a white fleece layer	
<b>Shelf Life</b>	18 months shelf life from date of production if stored properly in undamaged, unopened, original sealed packaging. (for expiry date see label)	
<b>Storage Conditions</b>	Dry storage at temperatures from +5°C up to +30°C. Protect from direct sunlight, rain, snow, ice, humidity, etc. Store in a horizontal position. Do not stack pallets of the membrane rolls on top of each other, or under pallets of any other materials during transport or storage.	
<b>Effective Thickness</b>	Total Thickness (= deff) Membrane Thickness Deviation	1.70mm 1.20mm (-5/+10%) (EN 1849-2)
<b>Straightness</b>	≤50mm/10m	(EN 1848-2)
<b>Mass per Unit Area</b>	1.50kg/m <sup>2</sup>	(-5/+10%) (EN 1849-2)

## TECHNICAL INFORMATION

<b>Resistance to Impact</b>	≥350mm	(EN 12691)
<b>Resistance to Root Penetration</b>	Pass	(CEN/TS 14416)
<b>Tensile Strength</b>	Machine direction: Cross direction:	≥ 700 N/50mm ≥ 700 N/50mm (EN 12311-1)
<b>Modulus of Elasticity in Tension</b>	≤ 65 N/mm <sup>2</sup>	(-/+10%) (EN ISO 527-3)
<b>Elongation</b>	Machine direction: Cross direction:	≥900% ≥1150% (EN 12311-1)
<b>Resistance to Tearing (nail shank)</b>	Machine direction: Cross direction:	≥ 550N ≥ 600N (EN 12310-1)
<b>Joint Shear Resistance</b>	≥300N/50mm	(EN 12317-2)
<b>Reaction to Fire</b>	Class E	(EN 13501-1)
<b>Accelerated Ageing in Alkaline Environment Tensile Strength</b>	Pass (28d/+23°C) Pass (Method B, 24h/60kPa)	(EN 1847) (EN 1928)
<b>Water Vapour Transimission</b>	0.35 g/m <sup>2</sup> x 24h μ = 67'000 sd = 114 m	(+23°C/75% r.h.) (-/+20%) (EN 1931)
<b>Water Tightness</b>	Pass (Method B, 24h/60kPa)	(EN 1928)
<b>Resistance to lateral water migration</b>	Pass, up to 7 bar	(ASTM D 5385 modified)
<b>Durability of Water Thightness against Ageing</b>	Pass (12 weeks) Pass (Method B, 24h/60kPa)	(EN 1296) (EN 1928)
<b>Durability of Water Thightness against Chemicals</b>	Pass (28d/+23°C) Pass (Method B, 24h/60kPa)	(EN 1847) (EN 1928)

<b>Permeability to Radon</b>	(5.3 +/-0.7) x 10 <sup>-12</sup> m <sup>2</sup> /s	(Certificate E-214/2011)
<b>Permeability to Methane</b>	180 ml/m <sup>2</sup> x d (-/+10%)	(ISO 7229)
<b>Service Temperature</b>	-10 °C min. / +35 °C max.	

## SYSTEM INFORMATION

### System Structure

#### System Components:

- SikaProof® A-12 membrane in rolls of widths 1.0 and 2.0 m
- SikaProof® Tape-150/A, self-adhesive tape for internal jointing, width 150 mm
- SikaProof® ExTape-150, self-adhesive tape for external jointing, width 150 mm

**Accessories:** Accessoires and complementary products are available additionally to create the relevant details and connections, see current Method Statement of SikaProof® A systems.

## APPLICATION INFORMATION

<b>Ambient Air Temperature</b>	minimum +5 °C / maximum +35 °C
<b>Substrate Temperature</b>	Surface to be bonded: minimal +5 °C, if below appropriate measures must be taken.

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY

SikaProof® A-12 membrane must be applied on a sufficiently stable substrate to avoid movement during the construction works. A smooth, uniform and clean substrate surface is essential to prevent membrane damage. Large gaps and voids (> 12-15 mm) be closed before installation of the SikaProof® A-12 membrane system. The substrate can be damp or slightly wet, but ponding water must be avoided. Suitable substrates to fix the SikaProof® A-12 membrane system onto include:

- Concrete blinding
- Formwork
- Rigid thermal insulation
- Plywood sheets / forms
- Compacted soil/fill with geotextile (only for limited requirements)

### APPLICATION METHOD / TOOLS

SikaProof® A-12 is a pre-applied waterproofing sheet, installed before the reinforcement is fixed and the structural concrete is poured.

#### General Installation Procedure:

- Check the substrate quality and conditions.
- Lay out the SikaProof® A-12 membrane sheets on the horizontal or vertical area using 1.0 or 2.0 m width rolls (as appropriate).
- All overlap joints will be bonded and sealed either with the self-adhesive strips lengthways on the membrane sheet or using the SikaProof® ExTape-150 outside and SikaProof® Tape-150 or SikaProof® Tape-150 A inside for all transverse joints and details. (There is no hot-air seam welding.)
- Form all details and connections according to the Method Statement using the appropriate SikaProof®

A-12 accessories.

- Use additional Sika Joint Solutions for sealing construction and expansion joints.
- Check the applied system, specially all overlap joints, connections and details for correct installation.
- The concrete has to be poured within 28 days after installation, directly onto SikaProof® A-12 system.
- A final inspection before is mandatory to ensure that the membrane system is ready and clean. Refer to the Method Statement to see the appropriate measure.
- After removing the formwork all penetrations, such as shuttering anchors, any membrane damage and any construction joints have to be sealed using the appropriate SikaProof® A-12 accessories or complementary Sika Waterproofing Systems.
- After removing the formwork and before backfilling, SikaProof® A-12 system has to be protected with an appropriate protection sheet as soon as possible within a limited period.

For more detailed information about installation please refer to the current SikaProof® A Method Statement and Application Manual. For more guidance please contact your local Sika Technical Service.

## LIMITATIONS

SikaProof® A-12 membranes must only be installed by Sika trained and approved contractors.

- The SikaProof® A Method Statement, with its technical guidelines and informations, must be complied with.
- Do not install SikaProof® A-12 membranes during continuous or prolonged rain- or snowfall.
- The substrate where the membrane is applied, must be clean and may be damp but have no ponded water.
- Do not use SikaProof® A-12 for applications in hot climate areas, therefore a special designed version is

available.

- The surface to be bonded (overlaps, connections etc.) must be clean, dry and minimum temperature above +5°C. (If below, appropriate measures must be taken.)
- The structural concrete must be placed within 4 weeks (28 days) after the SikaProof® A-12 membrane system is installed.
- An adequate concrete quality (mix design and workmanship) is required to achieve optimum full bond of the SikaProof® A-12 membrane system to the structural concrete, and
- Additional Sika® Joint Sealing Solutions (minimum SikaSwel®) must be used for connections, around penetrations and in constructions and expansion joints.
- The SikaProof® A-12 membrane are not permanently UV and weather resistant. Therefore the membrane system must not be installed on structures permanently exposed to UV light and weathering
- After removing the formwork the membrane system (membrane side) has to be protected as soon as possible, at the latest after 3 months (90 days) or before the backfilling.

For more detailed information and guidance please refer to the current Method Statement for the SikaProof® A membrane system.

#### Recommended Standard Use:

Sika recommend to use the SikaProof® A-12 membrane system for damp proofing and waterproofing of below ground constructions up to a certain demand. To select the SikaProof® A type of membrane, please refer to the SikaProof® A Method Statement, section 4) Project Design, where the appropriate selection criteria are described. For more information and assistance on the selection and specification of the appropriate solution for your project, please contact your local Sika Technical Services.

## BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

## LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

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## ECOLOGY HEALTH AND SAFETY

### REGULATION (EC) NO 1907/2006 - REACH

This product is an article as defined in article 3 of regulation (EC) No 1907/2006 (REACH). It contains no substances which are intended to be released from the article under normal or reasonably foreseeable conditions of use. A safety data sheet following article 31 of the same regulation is not needed to bring the product to the market, to transport or to use it. For safe use follow the instructions given in this product data sheet. Based on our current knowledge, this product does not contain SVHC (substances of very high concern) as listed in Annex XIV of the REACH regulation or on the candidate list published by the European Chemicals Agency in concentrations above 0.1 % (w/w)

## LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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