

# SikaProof® A

Fully bonded FPO sheet membrane waterproofing system for basements and other below ground structures

Construction

## Product Description

SikaProof® A is a fully and permanently bonded, self-adhesive, composite sheet membrane waterproofing system for reinforced concrete structures. It consists of an embossed polyolefin (FPO) based membrane laminated with a sealant grid and a non-woven fleece. SikaProof® A 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

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
- below ground reinforced concrete walls with both single and double -faced formwork
- extensions and reconstruction works
- prefabricated structures

## Characteristics / Advantages

- Cold-applied (no pre-heating or open flames) and pre-applied, before the reinforcement is fixed and the concrete is poured
- Fully and permanently bonded to the reinforced concrete structure
- No lateral water underflow or migration between the concrete structure and the membrane system
- High watertightness tested according to many standards
- Easy to install with fully adhered joints (no welding required)
- 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 systems including:
  - Sikaplan® WT membranes, FPO-based sheet waterproofing membranes
  - Sikadur-Combiflex SG system, FPO-based joint sealing system

## Tests

### Approval / Standards

- Product Declaration EN 13967 – Flexible sheets for waterproofing (type A&T)  
CE Certificate No. 1349-CPD-065, 16.08.2011
- German abP “allgemeines bauaufsichtliches Prüfzeugnis“, MPA NRW, approval No. P-22-MPANRW-8600, 26.05.2011
  - Function test for standard details, Wissbau, according German standards
    - For SikaProof A-08, test report No. 2010-212, 03.05.2011
    - For penetration details, test report No. 2010-212-6, 25.11.2011
    - For pile cap detail, test report No. 2012-212-7, 25.11.2011
  - BBA technical approval for construction, Certificate No. 13/5075, 16.12.2013
  - Cahier des Charges, French technical approval CCT 57, 28.02.2013
  - BRANZ appraisal, New Zealand, No. 852 (2014), 05.02.2014
  - ASTM Test reports No. 1240-13 A to C, 05.02.2014



## Product Data

### Form

<b>Appearance / Colours</b>	Light yellow sheet membrane, laminated with a fleece layer		
<b>Packaging</b>	SikaProof® A rolls are wrapped individually in a yellow PE-foil.		
		Roll width	Roll length
	SikaProof® A-05	1 m and 2 m	30 m
	SikaProof® A-08	1 m and 2 m	25 m
	SikaProof® A-12	1 m and 2 m	20 m

### Storage

<b>Storage Conditions / Shelf life</b>	SikaProof® A membrane rolls have a shelf-life of 18 months from date of production if stored properly in unopened, undamaged, original packaging, in a horizontal position, in dry conditions and at temperatures between +5°C and +30°C. They must be protected from direct sunlight, rain, snow and ice, etc. Do not stack pallets of the rolls on top of each other, or under pallets of any other materials during transport or storage.
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### Technical Data

<b>Chemical Base</b>	Membrane Layer:	Flexible Polyolefin (FPO)			
	Sealant grid:	Polyolefin (PO)			
	Fleece layer:	Polypropylene (PP)			
<b>Product Declaration</b>	EN 13967, mandatory for European countries				
<b>Visible Defects</b>	Pass			EN 1850-2	
<b>Straightness</b>	≤ 50 mm / 10 m			EN 1848-2	
<b>Mass per Unit Area</b>	SikaProof® A-05	0.85 kg/m <sup>2</sup>	(-5 /+10%)	EN 1849-2	
	SikaProof® A-08	1.15 kg/m <sup>2</sup>	(-5 /+10%)		
	SikaProof® A-12	1.50 kg/m <sup>2</sup>	(-5 /+10%)		
<b>Thickness</b>		Total Thickness (=deff)	Master Membrane Thickness	Deviation	EN 1849-2
	SikaProof® A-05	1.10 mm	0.50 mm	(-5 /+10%)	
	SikaProof® A-08	1.35 mm	0.80 mm	(-5 /+10%)	
	SikaProof® A-12	1.70 mm	1.20 mm	(-5 /+10%)	
<b>Watertightness to Liquid Water</b>	Pass				EN 1928 B (24 h / 60 kPa)
<b>Resistance to Impact</b>	SikaProof® A-05	≥ 150 mm			EN 12691
	SikaProof® A-08	≥ 250 mm			
	SikaProof® A-12	≥ 350 mm			
<b>Durability of Watertightness against Ageing</b>	Pass				EN 1296 (12 weeks) EN 1928 B (24h / 60 kPa)
<b>Durability of Watertightness against Chemicals</b>	Pass				EN 1847 (28 d/+23 °C) EN 1928 B (24h / 60 kPa)
<b>Accelerated Ageing in an Alkaline Environment, Tensile Strength</b>	Pass				EN 1847 (28 d/+23 °C) EN 1928 B (24 h / 60 kPa)

<b>Resistance to Tear - Nail Shank (Machine Direction)</b>	SikaProof® A-05	≥ 375 N	EN 12310-1
	SikaProof® A-08	≥ 400 N	
	SikaProof® A-12	≥ 550 N	
<b>Resistance to Tear - Nail Shank (Cross Direction)</b>	SikaProof® A-05	≥ 400 N	EN 12310-1
	SikaProof® A-08	≥ 450 N	
	SikaProof® A-12	≥ 600 N	
<b>Joint Strength</b>	SikaProof® A-05	≥ 125 N / 50 mm	EN 12317-2
	SikaProof® A-08	≥ 200 N / 50 mm	
	SikaProof® A-12	≥ 300 N / 50 mm	
<b>Tensile Strength (Machine Direction)</b>	SikaProof® A-05	≥ 400 N / 50 mm	EN 12311-1
	SikaProof® A-08	≥ 450 N / 50 mm	
	SikaProof® A-12	≥ 700 N / 50 mm	
<b>Tensile Strength (Cross Direction)</b>	SikaProof® A-05	≥ 300 N / 50 mm	EN 12311-1
	SikaProof® A-08	≥ 450 N / 50 mm	
	SikaProof® A-12	≥ 700 N / 50 mm	
<b>Elongation (Machine Direction)</b>	SikaProof® A-05	≥ 550 %	EN 12311-1
	SikaProof® A-08	≥ 700 %	
	SikaProof® A-12	≥ 900 %	
<b>Elongation (Cross Direction)</b>	SikaProof® A-05	≥ 900 %	EN 12311-1
	SikaProof® A-08	≥ 1000 %	
	SikaProof® A-12	≥ 1150 %	
<b>Water Vapour Transmission</b>	SikaProof® A-05	0.63 g/m <sup>2</sup> x 24 h m = 57'500 (- /+20%) Sd = 63 m	EN 1931 (+23°C / 75% r.h.)
	SikaProof® A-08	0.51 g/m <sup>2</sup> x 24 h m = 58'000 (- /+20%) Sd = 78 m	
	SikaProof® A-12	0.35 g/m <sup>2</sup> x 24 h m = 67'000 (- /+20%) Sd = 114 m	
<b>Resistance to Static Load</b>	≥ 20 kg		EN 12730 (Method B, 24 h/20 kg)
<b>Reaction to Fire</b>	Class E		EN 13501-1:2000
<b>Additional Data (not CE relevant)</b>			
<b>Waterresistance to lateral water underflow of membrane system</b>	SikaProof® A-08	Pass up to 7.0 bar	ASTM D 5385 mod.
	SikaProof® A-12	Pass up to 7.0 bar	
<b>Radon Gas Diffusion Coefficient</b>	SikaProof® A-08	(2.0 +/- 0.3) x 10 <sup>-12</sup> m <sup>2</sup> /s	Certificate E-214/2011
	SikaProof® A-12	(5.3 +/- 0.7) x 10 <sup>-12</sup> m <sup>2</sup> /s	Certificate E-215/2011
	SikaProof® A-08 joints	(6.1 +/- 1.1) x 10 <sup>-12</sup> m <sup>2</sup> /s	Certificate E-225/2012
<b>Methane Gas Permeability</b>	SikaProof® A-08	140 ml / m <sup>2</sup> x d	ISO 7229
	SikaProof® A-08 joints	180 ml / m <sup>2</sup> x d (- /+10%)	
<b>Root Resistance</b>	SikaProof® A-08 joints	Pass	CEN/TS 14416

**ASTM Data**All ASTM Data,  
Nelson Testing Lab Report

<b>Hydrostatic Pressure</b>	SikaProof® A-05	Pass	ASTM D 5385 (100 psi)
	SikaProof® A-08	Pass	
	SikaProof® A-12	Pass	
<b>Low Temperature Flexibility</b>	SikaProof® A-05	Pass	ASTM D 1970 (-20 °F)
	SikaProof® A-08	Pass	
	SikaProof® A-12	Pass	
<b>Crack Cycling</b>	SikaProof® A-05	Pass	ASTM C 836 (-15°F, 10 cycles)
	SikaProof® A-08	Pass	
	SikaProof® A-12	Pass	
<b>Tensile Strength</b>	SikaProof® A-05	≥ 1'125 psi	ASTM D 412
	SikaProof® A-08	≥ 1'125 psi	
	SikaProof® A-12	≥ 1'255 psi	
<b>Elongation</b>	SikaProof® A-05	≥ 650 %	ASTM D 412
	SikaProof® A-08	≥ 685 %	
	SikaProof® A-12	≥ 725%	
<b>Puncture Resistance</b>	SikaProof® A-05	≥ 125 lbs	ASTM E 154
	SikaProof® A-08	≥ 140 lbs	
	SikaProof® A-12	≥ 180 lbs	
<b>Peel Adhesion to Concrete</b>	SikaProof® A-05	≥ 42 lbs/in	ASTM D 903
	SikaProof® A-08	≥ 48 lbs/in	
	SikaProof® A-12	≥ 50 lbs/in	
<b>Lap peel adhesion</b>	SikaProof® A-05	≥ 40 lbs/in	ASTM D 1876
	SikaProof® A-08	≥ 40 lbs/in	
	SikaProof® A-12	≥ 40 lbs/in	
<b>Water Vapor Transmission</b>	SikaProof® A-05	≥ 0.40 perms	ASTM E 96 (- /+20%)
	SikaProof® A-08	≥ 0.35 perms	
	SikaProof® A-12	≥ 0.25 perms	
<b>Water Absorption</b>	SikaProof® A-05	≥ 2.2 %	ASTM D 570 (- /+20%)
	SikaProof® A-08	≥ 2.2 %	
	SikaProof® A-12	≥ 1.2 %	

## System Information

<b>System Components</b>	<ul style="list-style-type: none"> <li>■ SikaProof® A-05, membrane in rolls of widths 1.0 and 2.0 m</li> <li>■ SikaProof® A-08, membrane in rolls of widths 1.0 and 2.0 m</li> <li>■ SikaProof® A-12, membrane in rolls of widths 1.0 and 2.0 m</li> <li>■ SikaProof® Tape-150, self-adhesive tape for internal jointing, based on butyl-rubber, width 150 mm</li> <li>■ SikaProof® ExTape-150, self-adhesive tape for external jointing, based on butyl-rubber, width 150 mm</li> </ul>
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<b>Accessories</b>	<ul style="list-style-type: none"> <li>■ SikaProof® A-08 / -12 Edge, preformed sheet in an L-shape, to form the waterproofing system edges, corners and connections</li> <li>■ SikaProof® Patch-200 B, external membrane patching tape for sealing any local damage or penetrations, supplied in 200 mm width</li> <li>■ SikaProof® FixTape-50, for fixing and repairing around details and penetrations</li> <li>■ SikaProof® MetalSheet, to create special details, e.g. around pile heads/caps</li> </ul>
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## Application Details

<b>Recommended System</b>	Selection criteria	SikaProof® A-05	SikaProof® A-08	SikaProof® A-12
	Typical uses	Damp-proofing / waterproofing / concrete protection	Waterproofing for civil engineering structures	Waterproofing for civil engineering structures
	Typical applications	Slabs on ground/ Walls / Precast elements	Base slabs / Walls / Precast elements	Base slab / Walls / Precast elements
	Maximum head of water (-pressure)	< 5 m (0.5 bar)	< 10 m (1.0 bar)	< 15 m (1.5 bar)
	Crack-bridging ability	Not tested	≤ 1 mm	≤ 2 mm

This list is not exhaustive it is intended as a general selection guide for specific design criteria.

For more information and assistance on the selection and specification of the appropriate solution for your project, please contact your local Sika company.

<b>Substrate Quality</b>	<p>SikaProof® A membrane must be applied on a sufficiently stable substrate to avoid movement during the construction works.</p> <p>A smooth, uniform and clean substrate surface is essential to prevent membrane damage. Large gaps and voids (&gt; 12-15 mm) be closed before installation of the SikaProof® A membrane system. The substrate can be damp or slightly wet, but ponding water must be avoided.</p> <p>Suitable substrates to fix the SikaProof® A membrane system onto include:</p> <ul style="list-style-type: none"> <li>■ Concrete blinding</li> <li>■ Formwork</li> <li>■ Rigid thermal insulation</li> <li>■ Plywood sheets / forms</li> <li>■ Compacted soil/fill with geotextile (only for limited requirements)</li> </ul>
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## Application Conditions / Limitations

<b>Bonding Surface Temperature</b>	+5°C min. / + 35°C
<b>Bonding Surface Moisture</b>	Dry, respect the dew point
<b>Ambient Air Temperature</b>	+5°C min. / + 35 °C

## Installation Instructions

### Installation Method

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

The overlap joints of SikaProof® A membranes are not welded, they are sealed and fully bonded by self-adhesive strips prefabricated on the membrane sheets or with detailing tapes SikaProof® ExTape-150 outside and SikaProof® Tape-150 inside.

Installation procedure:

- Ensure the substrate fulfils the necessary requirements.
- 1. First start to install the perimeter edges and terminations, using a SikaProof® A Edge sheet or standard membrane sheets.
- 2. Form the corners with the membrane sheets, as in the Method Statment.
- 3. Lay out the SikaProof® A membrane sheets on the horizontal and vertical surfaces using 1.0 or 2.0 m width rolls (as appropriate) and bond the overlap joints with the self- adhesive strips lengthways and for cross joints using the SikaProof® ExTape-150 outside and SikaProof® Tape-150 inside.
- 4. Form the details, according to the Method Statement using the appropriate accessory products.
- After the installation is completed, it is recommend inspection to check all of the overlap joints, connections and details, to ensure they are correctly installed and fully bonded.
- Also before the concrete is poured onto SikaProof® A system, it is recommend a final inspection of the SikaProof® A waterproofing system to ensure the optimum bond between the SikaProof® A system and the reinforced concrete structure.
- 5. After removing the formwork all penetrations, such as shuttering anchors, any membrane damage and any construction joints have to be sealed on the external side (membrane side) using the appropriate accessories or complementary Sika waterproofing products.
- After removing the formwork SikaProof® A system has to be protected in accordance with the stated requirements.
- Before backfilling the SikaProof® A membranes has to be finally protected.

For more detailed information about installation, please refer to the current SikaProof® A system Method Statement and Application Manual.

### Notes on Installation / Limitations

- SikaProof® A membranes must only be installed by Sika trained and approved contractors.
- Do not install SikaProof® A membranes during continuous or prolonged rainfall.
- SikaProof® A membrane is not permanently UV and weather resistant. The membrane sheets have to be protected against such exposure:
  - For example, the structural concrete has to be placed onto the SikaProof® A membranes within 4 weeks in the climate of central Europe. For more detailed informations please refer to the current Method Statement.
  - SikaProof® A membranes must not be installed on structures permanently exposed to UV light and weathering.
- For the fully bond of the SikaProof® A membrane system to the structural concrete an adequate concrete quality (mix design) is required, please refer to the current Method Statement.
- Additional joint sealing using SikaSwell® S-2 or SikaSwell® A is recommended for connections, around penetrations and in constructions joints.

**Value Base** 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.

**Ecology, Health and Safety Information** A Safety Data Sheet following EC- Regulation 1907/2006, Article 31 is not needed to bring the product to the market, to transport or to use it. The product does not damage the environment when used as specified.

**REACH** Editorial note for National Data Sheet:  
(This part highlighted in yellow must be deleted during preparation of the National Product Data Sheets)  
The following information must be provided automatically and without prompting to industrial and professional users and distributors in any country in which REACH regulations are applicable (Article 33.1):

European Community Regulation on chemicals and their safe use (REACH: EC 1907/2006)

This product is an article within the meaning 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. Therefore, there are no registration requirements for substances in articles within the meaning of Article 7.1 of the Regulation.

Based on our current knowledge, this product does not contain SVHC (substances of very high concern) from the candidate list published by the European Chemicals Agency in concentrations above 0.1 % (w/w).

**Legal Notes** "Any information or suggestions for use concerning Sika's products, which we either in writing or orally have given buyers or end-users of the product have been given in good faith based on our own experiences and based on approved praxis and the technological and scientific knowledge on the time of giving such suggestions and information, which are given without any type of guarantees, and which do not lead to any further responsibility from Sika Danmark A/S, besides what is stated in the sales agreement in question. The buyer or end-user should themselves investigate or otherwise make sure that our products are suitable for the use in question and further make sure that the products are kept and used correct and in agreement with the published rules and considering the actual conditions in order to avoid damages or less satisfactory results. Any order is accepted and any deliverance is effected according to the general terms of sales and delivery from Sika Danmark A/S, which are considered known and accepted, and which could be handed out when asked for. Our catalogues are not updated automatically. The present product data sheet is only for use in Denmark. Values stated in the present product data sheet should be seen as recommended, unless stated otherwise."



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