

SikaProof® A

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

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: <ul style="list-style-type: none">■ 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 <ul style="list-style-type: none">■ 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:<ul style="list-style-type: none">■ 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 <ul style="list-style-type: none">■ 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

Construction



Product Data

Form

Appearance / Colours	Light yellow sheet membrane, laminated with a fleece layer		
Packaging	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

Storage Conditions / Shelf Life	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.
--	--

Technical Data

Chemical Base:	Membrane Layer:	Flexible Polyolefin (FPO)			
	Sealant grid:	Polyolefin (PO)			
	Fleece layer:	Polypropylene (PP)			
Product declaration	EN 13967, mandatory for European countries				
Visible defects	Pass			EN 1850-2	
Straightness	≤ 50 mm / 10 m			EN 1848-2	
Mass per Unit Area	SikaProof® A-05	0.85 kg/m ²	(-5 /+10%)	EN 1848-2	
	SikaProof® A-08	1.15 kg/m ²	(-5 /+10%)		
	SikaProof® A-12	1.50 kg/m ²	(-5 /+10%)		
Thickness		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%)	
Watertightness to liquid water	Pass				EN 1928 B (24 h/60 kPa)
Resistance to Impact	SikaProof® A-05	≥ 150 mm			
	SikaProof® A-08	≥ 250 mm			
	SikaProof® A-12	≥ 350 mm			
Durability of watertightness against ageing	Pass				EN 1296 (12 weeks) EN 1928 B (24h / 60 kPa)
Durability of watertightness against chemicals	Pass				EN 1847 (28 d/+23 °C) EN 1928 B (24h / 60 kPa)
Accelerated ageing in an alkaline environment, tensile strength	Pass				EN 1847 (28 d/+23 °C) EN 1928 B (24 h/60 kPa)
Bitumen Compatibility	Pass				EN 1548 (28 d/+70°C) EN 1928 A

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

ASTM Data

Hydrostatic Pressure	SikaProof® A-05	Pass	ASTM D 5385 (100 psi)
	SikaProof® A-08	Pass	
	SikaProof® A-12	Pass	
Low Temperature Flexibility	SikaProof® A-05	Pass	ASTM D 1970 (-20 °F)
	SikaProof® A-08	Pass	
	SikaProof® A-12	Pass	
Crack Cycling	SikaProof® A-05	Pass	ASTM C 836 (-15°F, 10 cycles)
	SikaProof® A-08	Pass	
	SikaProof® A-12	Pass	
Tensile Strength	SikaProof® A-05	≥ 1'125 psi	ASTM D 412
	SikaProof® A-08	≥ 1'125 psi	
	SikaProof® A-12	≥ 1'225 psi	
Elongation	SikaProof® A-05	≥ 650 %	ASTM D 412
	SikaProof® A-08	≥ 685 %	
	SikaProof® A-12	≥ 725 %	
Puncture Resistance	SikaProof® A-05	≥ 125 lbs	ASTM E 154
	SikaProof® A-08	≥ 140 lbs	
	SikaProof® A-12	≥ 180 lbs	
Peel Adhesion to Concrete	SikaProof® A-05	≥ 42 lbs/in	ASTM D 903
	SikaProof® A-08	≥ 48 lbs/in	
	SikaProof® A-12	≥ 50 lbs/in	
Lap peel adhesion	SikaProof® A-05	≥ 40 lbs/in	ASTM D 1876
	SikaProof® A-08	≥ 40 lbs/in	
	SikaProof® A-12	≥ 40 lbs/in	
Water Vapour Transmission	SikaProof® A-05	≥ 0.40 perms	ASTM E 96
	SikaProof® A-08	≥ 0.35 perms	
	SikaProof® A-12	≥ 0.25 perms (- /+20%)	
Water Absorption	SikaProof® A-05	≥ 2.2%	ASTM D 570
	SikaProof® A-08	≥ 2.2%	
	SikaProof® A-12	≥ 1.2% (- /+20%)	

System Information

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

Application Details

Recommended System	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.

Substrate quality	<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 (> 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"> ■ Concrete blinding ■ Formwork ■ Rigid thermal insulation ■ Plywood sheets / forms ■ Compacted soil/fill with geotextile (only for limited requirements)
--------------------------	--

Application Conditions / Limitations

Bonding Surface temperature	+5°C min. / + 35°C max.
Bonding Surface Moisture	Dry, respect the dew point

**Ambient maximum
(Temperature of liquids)** +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 SikaSwel® S-2 or SikaSwel® 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.

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.

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.



Sika Australia Pty Limited
ABN 12 001 342 329

Phone 1300 22 33 48
aus.sika.com

