

# PRODUCT DATA SHEET

## SikaProof® A-12 HC

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



### DESCRIPTION

SikaProof® A-12 HC is a fully bonded, composite sheet membrane waterproofing system for reinforced concrete structures designed for use in hot climate areas. 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 HC 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.

Suitable for use in hot and tropical climatic conditions.

### USES

SikaProof® A-12 HC 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
- Specially designed for use in hot climate areas
- 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 / CERTIFICATES

- Function test for area and 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

### PRODUCT INFORMATION

Composition	Membrane layer	Flexible Polyolefin (FPO)
	Sealant grid	Polyolefin (PO)
	Fleece layer	Polypropylene (PP)

<b>Packaging</b>	SikaProof® A-12 HC rolls are wrapped individually in a yellow PE-foil.		
	Roll width	1 m and 2 m	
	Roll length	20 m	
<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 (= <i>d<sub>eff</sub></i> )	1.70 mm (-5 / +10 %)	(EN 1849-2)
	Membrane Thickness	1.20 mm	
<b>Mass per unit area</b>	1.50 kg/m <sup>2</sup>	(-5 / +10 %)	(EN 1849-2)

## TECHNICAL INFORMATION

<b>Resistance to Impact</b>	≥ 350 mm		(EN 12691)
<b>Resistance to Root Penetration</b>	Pass		(CEN/TS 14416)
<b>Tensile Strength</b>	Machine Direction	≥400 N/50 mm	(EN 12311-1)
	Cross Direction	≥300 N/50 mm	
<b>Modulus of Elasticity in Tension</b>	≤ 65 N/mm <sup>2</sup>	± 10 %	(EN ISO 527-3)
<b>Elongation</b>	Machine Direction	≥900 %	(EN 12311-1)
	Cross Direction	≥1150 %	
<b>Resistance to Tear</b>	Machine Direction	≥550 N	(EN 12310-1)
	Cross Direction	≥600 N	
<b>Joint Shear Resistance</b>	≥ 275 N/50 mm		(EN 12317-2)
<b>Reaction to Fire</b>	Class E		(EN 13501-1)
<b>Accelerated Ageing in Alkaline Environment</b>	Pass		(EN 1847) (28 d / +23 °C) (EN 1928, Method B) (24 h / 60 kPa)
<b>Water Vapour Transmission</b>	0.35 g/m <sup>2</sup> x 24 h μ = 67 000 s <sub>d</sub> = 114 m	(± 20 %)	(EN 1931) (+23 °C / 75 % r.h.)
<b>Resistance to lateral water migration</b>	Pass, up to 7 bar		(ASTM D 5385 modified)
<b>Durability of Watertightness against Ageing</b>	Pass		(EN 1296) (12 weeks) (EN 1928, Method B) (24 h / 60 kPa)
<b>Durability of Watertightness against Chemicals</b>	Pass		(EN 1847) (28 d / +23 °C) (EN 1928, Method B) (24 h / 60 kPa)
<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.		

## SYSTEMS

### System Structure

#### System Components:

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

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

## APPLICATION INFORMATION

**Ambient Air Temperature** +10 °C min. / +45 °C max.

**Substrate Temperature** +10 °C min. / +60 °C max.

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY

SikaProof® A-12 HC 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 less than 12 to 15 mm be closed before installation of the SikaProof® A-12 HC membrane system. The substrate can be damp or slightly wet, but ponding water must be avoided. Suitable substrates to fix the SikaProof® A-12 HC 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 HC 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 HC 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 HC accessories.
- Use additional Sika Joint Solutions for sealing construction and expansion joints.
- Check the applied system, especially all overlap joints, connections and details for correct installation.

- The concrete has to be poured within 42 days after installation, directly onto SikaProof® A-12 HC system.
- A final inspection before casting concrete is mandatory to ensure that the membrane system is ready and clean. Refer to the Method Statement for details on appropriate measures.
- 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 HC accessories or complementary Sika Waterproofing Systems.
- After removing the formwork and before backfilling, SikaProof® A-12 HC 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 Sika Technical Service.

## IMPORTANT CONSIDERATIONS

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

- The SikaProof® A Method Statement, with its technical guidelines and information, must be complied with.
- Do not install SikaProof® A-12 HC membranes during continuous or prolonged rainfall or sandstorm.
- The substrate where the membrane is applied must be clean and maximum damp.
- The surface to be bonded (overlaps, connections etc.) must be clean, dry and at a minimum temperature above +10 °C. (If below, appropriate measures must be applied).
- The structural concrete must be placed within 42 days after the SikaProof® A-12 HC membrane system is installed.
- An adequate concrete quality (mix design and workmanship) is required to achieve optimum full bond of the SikaProof® A-12 HC membrane system to the structural concrete.
- Additional Sika® Joint Sealing Solutions (minimum SikaSwel®) must be used for connections, around

penetrations and in construction and expansion joints.

- The SikaProof® A-12 HC membrane is 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.
- Average service temperature range in soil and groundwater is from -10 °C minimum to +35 °C maximum.

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 HC membrane system for damp proofing and waterproofing of below ground constructions up to a certain demand. Refer to section 4 "Project Design" of the SikaProof® Method Statement for selecting the most suitable type of SikaProof® A membrane. Amongst others a maximum head of water of 15 m (1.5 bar) is recommended. Contact Sika Technical Department for additional information and assistance on the selection and specification of the appropriate solution for your project.

## BASIS OF PRODUCT DATA

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

## LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

## 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 the 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.

#### SIKA NORTHERN GULF

Bahrain / Qatar / Kuwait  
Tel: +973 177 38188  
sika.gulf@bh.sika.com  
gcc.sika.com

#### SIKA SOUTHERN GULF

UAE / Oman / SIC  
Tel: +971 4 439 8200  
info@ae.sika.com  
gcc.sika.com

#### SIKA SAUDI ARABIA

Riyadh / Jeddah / Damman  
Tel: +966 11 217 6532  
info@sa.sika.com  
gcc.sika.com



ISO 9001: Sika UAE LLC,  
Sika Gulf B.S.C. (c),  
Sika Saudi Arabia Co. Ltd,  
Sika Qatar LLC  
ISO 14001: Sika UAE LLC,  
Sika Gulf B.S.C. (c),  
Sika Saudi Arabia Co. Ltd  
OHSAS: Sika UAE LLC,  
Sika Gulf B.S.C. (c)

All products are supplied  
under a management  
system certified to conform  
to the requirements of the  
quality, environmental and  
occupational health &  
safety standards ISO 9001,  
ISO 14001 and OHSAS  
18001.

#### Product Data Sheet

SikaProof® A-12 HC  
October 2017, Version 01.02  
020704210210000006

SikaProofA-12HC-en-AE-(10-2017)-1-2.pdf

