

# PRODUCT DATA SHEET

## SikaProof® A-12

FPO SHEET MEMBRANE FOR PRE-APPLIED FULLY BONDED BELOW GROUND WATERPROOFING



### PRODUCT DESCRIPTION

SikaProof® A-12 is an embossed polyolefin FPO sheet membrane for pre-applied fully bonded below ground waterproofing of reinforced concrete structures. Membrane thickness 1,2 mm. SikaProof® A-12 is cold-applied without heat or open flames to prepared substrates or onto formwork before fixing reinforcement and concrete placement. The membrane has self-adhesive longitudinal strips for bonding overlap joints and is laminated with a unique sealant and a non-woven fleece backing layer which creates a bond with the cast concrete.

### USES

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

Waterproofing, concrete protection and gas resistant membrane for basements and other below ground concrete structures against ground water ingress. Suitable for use on:

- Reinforced concrete base slabs
- Reinforced concrete walls with both single and double-faced formwork
- Extension and reconstruction works
- Prefabricated structures
- Shotcrete structures

### CHARACTERISTICS / ADVANTAGES

- Can be used as a methane and carbon dioxide resistant membrane when installed as a waterproofing membrane fully bonded to concrete according to BS:8485:2015+A1 2019.
- Will restrict the ingress of radon into buildings from naturally occurring sources
- Fully bonded to the reinforced concrete structure
- No lateral water underflow between the concrete structure and the membrane system
- Validated high watertightness
- High flexibility and crack-bridging

- Pre-applied, before fixing reinforcement and concrete placement
- Easy to install with fully adhered joints (no welding required)
- Cold-applied (no pre-heating or open flames)
- Good tear and impact resistant properties
- Temporarily resistant to weathering and UV-light during construction
- Highly durable and resistant to aging
- Resistant to aggressive elements in natural ground water and soil
- Can be combined with other approved Sika Waterproofing / Joint Sealing Systems

### ENVIRONMENTAL INFORMATION

- BRE Environmental Product Declaration (EPD) available

### APPROVALS / STANDARDS

- CE Marking and Declaration of Performance to EN 13967 - Flexible sheets for waterproofing - Damp proofing and basement tanking
- Agreement Certificate, SikaProof® A-08 & A-12, BBA, Certificate No.13-5075
- Test Certificate, DIN EN 13967, SikaProof® A-12, MPAN-RW, Certificate No.P-22-MPANRW-11990-2
- CCT57, SikaProof® - Sika Bit®, SOCOTEC, No.601ROE-AD9247
- NZBC, SikaProof® A, BRANZ, Appraisal No.852(2014)
- Test Report Penetrations and Pipes, SikaProof® A-08, WISSBAU, No.2010-212-6
- Test Report Pile Head, SikaProof® A-08, WISSBAU, No.2010-212-7

## PRODUCT INFORMATION

|  |   |                           |                        |
|--|---|---------------------------|------------------------|
| <b>Chemical Base</b>   | Membrane Layer  | Flexible Polyolefin (FPO) |                        |
|  | Sealant grid  | Polyolefin (PO)           |                        |
|  | Fleece layer  | Polypropylene (PP)        |                        |
| <b>Packaging</b>   | Rolls wrapped individually in a yellow PE-film.   |                           |                        |
|  | <b>Product</b>  | <b>Roll width</b>         | <b>Roll length</b>     |
|  | SikaProof® A-12   | 1,00 or 2,00 m            | 20 m                   |
|  | Refer to current price list for packaging variations.   |                           |                        |
| <b>Appearance / Colour</b>   | Light yellow sheet membrane, laminated with a white fleece layer  |                           |                        |
| <b>Shelf Life</b>  | 18 months from date of production   |                           |                        |
| <b>Storage Conditions</b>  | Product must be stored in original unopened and undamaged sealed packaging in dry conditions and temperatures between + 5 °C and + 30 °C. Store in a horizontal position. Do not stack pallets of the rolls on top of each other, or under pallets of any other materials during transport or storage. Always refer to packaging. |                           |                        |
| <b>Product Declaration</b>   | EN 13967:Flexible sheets for waterproofing – Damp proofing and basement tanking   |                           |                        |
| <b>Effective Thickness</b>   | Total Thickness (= deff)  | 1,70 mm (-5 % / +10 %)    | (EN 1849-2)            |
|  | Membrane Thickness  | 1,20 mm                   |                        |
| <b>Mass per unit area</b>  | 1,50kg/m <sup>2</sup> (-5 % / +10 %)  |                           | (EN 1849-2)            |
| <b>TECHNICAL INFORMATION</b>                                       |   |                           |                        |
| <b>Resistance to Impact</b>  | ≥350 mm   |                           | (EN 12691)             |
| <b>Resistance to Static Load</b>                                   | ≥ 20 kg   |                           | (EN 12730)             |
| <b>Resistance to Root Penetration</b>                              | Pass  |                           | (CEN/TS 14416)         |
| <b>Tensile Strength</b>  | Machine direction   | ≥ 700 N/50 mm             | (EN 12311-1)           |
|  | Cross direction   | ≥ 700 N/50 mm             |                        |
| <b>Tensile Modulus of Elasticity</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 Tearing (nail shank)</b>                          | Machine direction   | ≥ 550 N                   | (EN 12310-1)           |
|  | Cross direction   | ≥ 600 N                   |                        |
| <b>Joint Shear Resistance</b>                                      | ≥300 N / 50 mm  |                           | (EN 12317-2)           |
| <b>Reaction to Fire</b>  | Class E   |                           | (EN 13501-1)           |
| <b>Accelerated Ageing in Alkaline Environment Tensile Strength</b> | Pass (28 d / +23 °C)  |                           | (EN 1847)              |
|  | Pass (Method B, 24 h / 60 kPa)  |                           | (EN 1928)              |
| <b>Water Vapour Transimission</b>                                  | 0,35 g/(m <sup>2</sup> ·24 h) (+23 °C / 75 % r.h.)  |                           | (EN 1931)              |
|  | μ = 67 000  |                           |                        |
|  | Sd = 114 m  |                           |                        |
| <b>Water Tightness</b>   | Pass (Method B, 24 h / 60 kPa)  |                           | (EN 1928)              |
| <b>Resistance to lateral water migration</b>                       | Pass, up to 7 bar   |                           | (ASTM D 5385 modified) |
| <b>Durability of Water Tightness against Ageing</b>                | Pass (12 weeks)   |                           | (EN 1296)              |
|  | Pass (Method B, 24 h / 60 kPa)  |                           | (EN 1928)              |

|  |  |                          |
|--|--|--------------------------|
| <b>Durability of Water Tightness against Chemicals</b> | Pass (28 d / +23 °C)<br>Pass (Method B, 24 h / 60 kPa) | (EN 1847)<br>(EN 1928)   |
| <b>Permeability to Radon</b>                           | 5,3±0,7 × 10 <sup>-12</sup> m <sup>2</sup> /s          | (Certificate E-214/2011) |
| <b>Permeability to Methane</b>                         | 140 ml/(m <sup>2</sup> ·d) (±10 %)                     | (ISO 7229)               |
| <b>Service Temperature</b>                             | -10 °C min. / +35 °C max.                              |                          |

## SYSTEM INFORMATION

### System Structure

The following system components must be used:

- SikaProof® A-12 sheet membrane
- SikaProof® A-12 Edge pre-formed L-shaped sheet membrane
- SikaProof® Tape-150 A self-adhesive tape for internal jointing
- SikaProof® ExTape-150 self-adhesive tape for external jointing

Ancillary products:

- Accessories and complementary products are available to provide detailing and connection solutions.

## APPLICATION INFORMATION

### Ambient Air Temperature

+ 5 °C min. / + 35 °C max.

### Substrate Temperature

Substrate bonding surface: minimal +5 °C (Refer to important considerations for more information)

## APPLICATION INSTRUCTIONS

### EQUIPMENT

- Tape measure
- Marking pen
- Razor knife
- Scissors
- Pressure roller
- Clean lint-free cloth
- Metal straight edge for cutting
- Protective sheet for cutting

### SUBSTRATE QUALITY

SikaProof® A-12 membrane must be applied on a sufficiently stable substrate to avoid movement during the construction works. Substrate surface must be smooth, uniform and clean. Large gaps and voids (> 12–15 mm) must be filled before membrane installation. Substrate can be damp or slightly wet, ponding water must be avoided. Suitable membrane fixing substrates include:

- Concrete blinding
- Formwork
- Rigid thermal insulation
- Plywood sheets / forms

### APPLICATION METHOD / TOOLS

#### Installation procedure

Reference must be made to further documentation where applicable, such as relevant method statement, application manual and installation or working instructions.

#### Installation method - General

After substrate conditions have been fulfilled, the waterproofing membrane is installed by loose laying with the fleece facing upwards or inwards onto horizontal /

inclined substrates or fastening onto vertical substrates. Pre-formed L-shaped SikaProof® A-12 Edge sheets are used for corner and edge details. Overlap joints are sealed using cold-applied self-adhesive strips or tapes. No heat or open flames are required for installing any part of the membrane system.

#### Overlap and transverse joints

All overlap and transverse joints must be bonded and sealed either with self-adhesive strips lengthways on the edge of the membrane sheet or using the SikaProof® ExTape-150 on the outside face and SikaProof® Tape-150 A on the inside face and all transverse joints.

#### Detailing

Form all details and connections using the appropriate SikaProof® ancillary products outlined in the 'Method Statement - SikaProof® A'

#### Construction and expansion joints

For sealing these types of joints, use additional Sika® Joint Solutions

#### Inspection and quality control of installation

A final inspection before placing concrete must be carried out to ensure the complete membrane system has been correctly installed, any damage repaired and fleeced surface is clean.

#### Concrete placement

Place concrete directly onto or against the membrane within 30 days after installation.

#### Formwork removal

After removing the formwork, all penetrations such as shuttering anchors, any membrane damage and construction joints must be sealed using the appropriate SikaProof® A-12 ancillary products or complementary Sika Waterproofing Systems.

#### Backfilling protection

After formwork removal and before backfilling.

SikaProof® A-12 system must be protected with an appropriate protection sheet as soon as possible or at

the latest within 90 days.

## FURTHER DOCUMENTS

- Method Statement - SikaProof® A
- Application Manual - SikaProof® A

## LIMITATIONS

Installation work must only be carried out by Sika® trained, approved or competent contractors experienced in this type of application.

- Reference must also be made to the 'Method Statement - SikaProof® A' and 'Application Manual - SikaProof® A' for more detailed information.
- Do not install SikaProof® A-12 membrane during continuous or prolonged rain or snowfall.
- The substrate application surface must be clean with no standing water.
- Do not use SikaProof® A-12 for applications in hot climates. Use the specially designed SikaProof® A-12 HC membrane.
- If SikaProof® A-12 has to be applied under wet conditions or temperatures below +5 °C. Exceptions are possible under special circumstances with appropriate precautions. Contact Sika® Technical Services for more information.
- Additional Sika® Joint Sealing Solutions (minimum SikaSwell®) must be used for connections, around penetrations and for construction and expansion joints.
- Concrete must be placed within 30 days after membrane system installation.
- Adequate concrete quality (mix design and workmanship) is required to achieve optimum adhesion of the membrane system to the concrete.
- SikaProof® A-12 membrane is not permanently UV and weather resistant. Therefore the membrane system must not be installed on structures where it will be permanently exposed to UV light.
- After formwork removal, the membrane system (yellow membrane side) must be protected as soon as possible or at the latest before backfilling or within 90 days after installation.
- To ensure the most suitable type of membrane is selected for the project, refer to section 4 'Project Design' of the 'Method Statement - SikaProof® A System' or contact Sika® Technical Services for more information

## 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

### 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.

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