## SikaProof® A-05/-08/-12

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

### Product Description

SikaProof® A-05/-08/-12 is a fully and permanently bonded, self-adhesive, composite sheet membrane waterproofing system for reinforced concrete of the main structure. It consists of an embossed polyolefin (FPO) membrane laminated with a sealant grid and a non-woven fleece. SikaProof® A-05/-08/-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

- Damp-proofing, concrete protection and waterproofing for basements and other below ground concrete structures against ground water ingress:
  - Below ground reinforced concrete slabs
  - Below ground reinforced concrete walls with both single and double-faced formwork
  - Extensions and reconstruction works
  - For prefabricated constructions

### 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 of the main structure
- No lateral water underflow or migration between the concrete structure and the membrane system
- High watertightness tested according various standards
- Easy to install with fully adhered joints (no welding required)
- Temporary weathering and UV resistant
- Resistant to ageing
- High flexibility and crack-bridging ability
- 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
- DoP - SikaProof A05 - 02 07 04 10 300 0 000001 1193
- DoP - SikaProof A08 - 02 07 04 10 300 0 000002 1193
- DoP - SikaProof A12 - 02 07 04 10 300 0 000003 1193
- Radon permeability, Slovak Medical University, for SikaProof A-12,
- Radon permeability, Slovak Medical University, for SikaProof A-08,
- Cahier des Charges, French technical appraisal 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
- 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

Product Data

Form

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

Packaging
SikaProof® A-05/-08/-12 rolls are wrapped individually in a yellow PE-foil.

<table>
<thead>
<tr>
<th>Roll width</th>
<th>Roll length</th>
</tr>
</thead>
<tbody>
<tr>
<td>SikaProof® A-05</td>
<td>1 m and 2 m</td>
</tr>
<tr>
<td>SikaProof® A-08</td>
<td>1 m and 2 m</td>
</tr>
<tr>
<td>SikaProof® A-12</td>
<td>1 m and 2 m</td>
</tr>
</tbody>
</table>

Storage

Storage Conditions / Shelf life
SikaProof® A-05/-08/-12 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

### Straightness
- \( \leq 50 \text{ mm} / 10 \text{ m} \)

### Mass per Unit Area
- SikaProof® A-05: 0.85 kg/m\(^2\) (-5% / +10%)
- SikaProof® A-08: 1.15 kg/m\(^2\) (-5% / +10%)
- SikaProof® A-12: 1.50 kg/m\(^2\) (-5% / +10%)

### Thickness

<table>
<thead>
<tr>
<th>SikaProof® A-05</th>
<th>Total Thickness (+def)</th>
<th>Master Membrane Thickness</th>
<th>Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.10 mm</td>
<td>0.50 mm</td>
<td>(-5% / +10%)</td>
<td></td>
</tr>
<tr>
<td>SikaProof® A-08</td>
<td>1.35 mm</td>
<td>0.80 mm</td>
<td>(-5% / +10%)</td>
</tr>
<tr>
<td>SikaProof® A-12</td>
<td>1.70 mm</td>
<td>1.20 mm</td>
<td>(-5% / +10%)</td>
</tr>
</tbody>
</table>

### Watertightness to Liquid Water
- Pass

### Resistance to Impact
- SikaProof® A-05: \( \geq 150 \text{ mm} \)
- SikaProof® A-08: \( \geq 250 \text{ mm} \)
- SikaProof® A-12: \( \geq 350 \text{ mm} \)

### Durability of Watertightness against Ageing
- Pass

### Durability of Watertightness against Chemicals
- Pass

### Accelerated Ageing in an Alkaline Environment, Tensile Strength
- Pass

### Resistance to Tear - Nail Shank (Machine Direction)
- SikaProof® A-05: \( \geq 375 \text{ N} \)
- SikaProof® A-08: \( \geq 400 \text{ N} \)
- SikaProof® A-12: \( \geq 550 \text{ N} \)

### Resistance to Tear - Nail Shank (Cross Direction)
- SikaProof® A-05: \( \geq 400 \text{ N} \)
- SikaProof® A-08: \( \geq 450 \text{ N} \)
- SikaProof® A-12: \( \geq 600 \text{ N} \)

### Joint Strength
- SikaProof® A-05: \( \geq 125 \text{ N} / 50 \text{ mm} \)
- SikaProof® A-08: \( \geq 200 \text{ N} / 50 \text{ mm} \)
- SikaProof® A-12: \( \geq 300 \text{ N} / 50 \text{ mm} \)

### Tensile Strength (Machine Direction)
- SikaProof® A-05: \( \geq 400 \text{ N} / 50 \text{ mm} \)
- SikaProof® A-08: \( \geq 450 \text{ N} / 50 \text{ mm} \)
- SikaProof® A-12: \( \geq 700 \text{ N} / 50 \text{ mm} \)

### Tensile Strength (Cross Direction)
- SikaProof® A-05: \( \geq 300 \text{ N} / 50 \text{ mm} \)
- SikaProof® A-08: \( \geq 450 \text{ N} / 50 \text{ mm} \)
- SikaProof® A-12: \( \geq 700 \text{ N} / 50 \text{ mm} \)

### Elongation (Machine Direction)
- SikaProof® A-05: \( \geq 550 \% \)
- SikaProof® A-08: \( \geq 700 \% \)
- SikaProof® A-12: \( \geq 900 \% \)
<table>
<thead>
<tr>
<th>Property</th>
<th>SikaProof® A-05</th>
<th>SikaProof® A-08</th>
<th>SikaProof® A-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elongation (Cross Direction)</td>
<td>≥ 900 %</td>
<td>≥ 1000 %</td>
<td>≥ 1150 %</td>
</tr>
<tr>
<td>Water Vapour Transmission</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SikaProof® A-05</td>
<td>0.63 g/m² x 24 h</td>
<td>m = 57'500</td>
<td>Sd = 63 m</td>
</tr>
<tr>
<td>SikaProof® A-08</td>
<td>0.51 g/m² x 24 h</td>
<td>m = 58'000</td>
<td>Sd = 78 m</td>
</tr>
<tr>
<td>SikaProof® A-12</td>
<td>0.35 g/m² x 24 h</td>
<td>m = 67'000</td>
<td>Sd = 114 m</td>
</tr>
<tr>
<td>Resistance to Static Load</td>
<td>≥ 20 kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reaction to Fire</td>
<td>Class E</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Additional Data (not CE relevant)**

- **Water resistance to lateral water underflow of membrane system**
  - SikaProof® A-08: Pass up to 7.0 bar
  - SikaProof® A-12: Pass up to 7.0 bar
- **Radon Gas Diffusion Coefficient**
  - SikaProof® A-08 joints: (2.0 +/- 0.3) x 10⁻¹² m²/s, Certificate E-214/2011
  - SikaProof® A-12 joints: (5.3 +/- 0.7) x 10⁻¹² m²/s, Certificate E-215/2011
- **Methane Gas Permeability**
  - SikaProof® A-08 joints: 140 ml / m² x d, Certificate E-225/2012
  - SikaProof® A-08 joints: 180 ml / m² x d

**ASTM Data**

- **Hydrostatic Pressure**
  - SikaProof® A-05: Pass
  - SikaProof® A-08: Pass
  - SikaProof® A-12: Pass
- **Low Temperature Flexibility**
  - SikaProof® A-05: Pass
  - SikaProof® A-08: Pass
  - SikaProof® A-12: Pass
- **Crack Cycling**
  - SikaProof® A-05: Pass
  - SikaProof® A-08: Pass
  - SikaProof® A-12: Pass
- **Tensile Strength**
  - SikaProof® A-05: ≥ 1'125 psi
  - SikaProof® A-08: ≥ 1'125 psi
  - SikaProof® A-12: ≥ 1'255 psi
- **Elongation**
  - SikaProof® A-05: ≥ 650 %
  - 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 Vapor Transmission

| SikaProof® A-05 | ≥ 0.40 perms (-/+20%) | ASTM E 96 |
| SikaProof® A-08 | ≥ 0.35 perms |
| SikaProof® A-12 | ≥ 0.25 perms |

## Water Absorption

| SikaProof® A-05 | ≥ 2.2 % (-/+20%) | ASTM D 570 |
| SikaProof® A-08 | ≥ 2.2 % |
| SikaProof® A-12 | ≥ 1.2 % |

## System Information

### System Components

- 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 butyl-rubber, in 150 mm width
- SikaProof® ExTape-150, self-adhesive tape for external jointing, based on butyl-rubber, in 150 mm width

### Accessories

- SikaProof® A -08 / -12 Edge, preformed sheet in 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, such as pile heads

## Application Details

### Recommended System

<table>
<thead>
<tr>
<th>General criteria</th>
<th>SikaProof® A-05</th>
<th>SikaProof® A-08</th>
<th>SikaProof® A-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical use</td>
<td>Damp-proofing / concrete protection / waterproofing</td>
<td>Waterproofing for civil engineered structures</td>
<td>Waterproofing for civil engineered structures</td>
</tr>
<tr>
<td>Typical application</td>
<td>Slab on ground/ Walls / Precast elements</td>
<td>Base slabs / Walls / Precast elements</td>
<td>Base slab / Walls / Precast elements</td>
</tr>
<tr>
<td>Crack-bridging ability</td>
<td>Not tested</td>
<td>≤ 1 mm</td>
<td>≤ 2 mm</td>
</tr>
</tbody>
</table>

This spreadsheet is not exhaustive. It can be used as general selection guide for specific decision criteria.

For further more information how to choose the appropriate Sika solution for basement waterproofing contact your local Sika representative.
Substrate Quality

The substrate for the SikaProof® A-05/-08/-12 membrane needs sufficient stability 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-05/-08/-12 membrane system. The substrate can be damp or slightly wet, but ponding water must be avoided.

Suitable substrates to fix the SikaProof® A-05/-08/-12 membrane system onto are:
- Concrete blinding
- Formwork
- Rigid thermal insulation
- Geotextile
- Compacted soil/fill with geotextile (only for low requirements)
- Plywood

Application Conditions / Limitations

<table>
<thead>
<tr>
<th>Bonding Surface Temperature</th>
<th>+5°C min. / + 35°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonding Surface Moisture</td>
<td>Dry, respect the dew point</td>
</tr>
<tr>
<td>Ambient Air Temperature</td>
<td>+5°C min. / + 35 °C</td>
</tr>
</tbody>
</table>

Application Instructions

**Application 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 fully adhered by self-adhesive strips prefabricated on the membrane sheet or with detailing tapes SikaProof® ExTape-150 outside and SikaProof® Tape-150 inside.

Installation procedure:

1. Ensure the substrate fulfil the requirements.
2. Start to install first the perimeter edges and connections, using an SikaProof® A Edge sheet or standard membrane sheets.
3. Form the corners with the used membrane sheets, according to the manual.
4. Lay the SikaProof® A membrane sheets on the horizontal and vertical surfaces using the 1.0 or 2.0 m width rolls (as appropriate) and adhere the overlap joints with the self-adhesive strips lengthways and for cross joints using the SikaProof® ExTape-150 outside and SikaProof® Tape-150 inside.
5. Form the details, according to the method statement using the appropriate accessory products.
6. After the installation is finished, it is recommended to inspect the applied SikaProof® A system, to check all the overlap joints, connections and details, to ensure they are correctly installed and fully adhered.
7. Also before the concrete is poured onto SikaProof® A system, it is recommend to inspect the SikaProof® A system finally, to ensure an optimum fully bond between SikaProof® A system and the main concrete structure to be waterproofed.
8. 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 accessory or complementary products.
9. After removing the formwork SikaProof® A system has to be protected within the limitation, see next section.
10. Before backfilling the excavation pit the SikaProof® A membranes has to be protected.

For further more detailed information about the installation method, please refer to the current Method Statement and Application Manual.
### Notes on Application / Limitations

- SikaProof® A membranes must only be installed by trained and approved Sika contractors.
- Do not apply 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 permanent UV/weather exposure:
  - For example, the structural concrete has to be casted onto SikaProof® A membrane within 4 weeks in the climate of central Europe. For more detailed informations refer to the current method statement.
  - SikaProof® A membrane cannot 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, refer to the current method statement.
- An additional joint sealing using SikaSwell® S-2 or SikaSwell® A is recommended for connections, penetrations and 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

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

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.