

## PRODUCT DATA SHEET

# SikaProof® A+ 12

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

#### PRODUCT DESCRIPTION

SikaProof® A+ 12 is a polyolefin (FPO) based sheet membrane for below ground waterproofing of reinforced concrete structures. It is loose laid onto prepared substrates or formwork before fixing reinforcement and casting concrete. A special hybrid bonding layer on the membrane forms a permanent bond with the fresh concrete. Overlap joints are sealed using cold-applied tapes. The total thickness is 1.75 mm with a membrane thickness of 1.20 mm.

#### WHERE TO USE

SikaProof® A+ 12 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:

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

#### CHARACTERISTICS / ADVANTAGES

- Pre-applied: Fixed before placing reinforcement and casting concrete
- Dual bond: Mechanical and adhesive bond with fresh concrete
- High flexibility and crack-bridging capabilities
- No lateral water migration between the concrete structure and the membrane system
- High watertightness tested according to various standards
- Fully and permanently bonded to the reinforced concrete structure
- Resistant to aggressive conditions in natural ground water and soil
- Easy to install with fully adhered joints
- Temporarily resistant to weathering and UV exposure during construction
- Can be combined with other approved Sika® Waterproofing / Joint Sealing Systems
- Excellent barrier to air, radon and methane

#### APPROVALS / CERTIFICATES

- CE Marking and Declaration of Performance to EN 13967 - Flexible sheets for waterproofing - Damp proofing and basement tanking
- Watertightness of a Surface Sealing System SikaProof® A+ 12 / SikaProof® Tape A+, WISSBAU®, Germany, No. 2018-275-1
- Watertightness of a Surface Sealing System SikaProof® A+ 12 / SikaProof® Sandwich Tape, WISSBAU®, Germany, No. 2018-276-1
- Watertightness of a Surface Sealing System SikaProof® A+ 12 / Thermal Jointing, WISSBAU®, Germany, No. 2019-231-1

# PRODUCT INFORMATION

CSC MasterFormat®

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## Composition / Manufacturing

Membrane Layer	Flexible Polyolefin (FPO)
Hybrid Layer	Cement modified polymer

## Packaging

Product	Roll width	Roll length
SikaProof® A+ 12	1.00 m or 2.00 m	20 m

## Shelf Life

18 months shelf life from date of production

## Storage Conditions

Product must be stored in original unopened and undamaged sealed packaging in dry conditions and temperatures between 5 °C (41°F) and 30 °C (86 °F). 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.

## Appearance / Colour

Light yellow membrane containing a light grey bonding layer

## Effective Thickness

Total Thickness (=deff)	1.75 mm (-5/+10%)	(ASTM D3767)
Membrane Thickness	1.20 mm	

## Mass per unit area

1,65 kg/m<sup>2</sup> (-5/+10 %) (EN 1849-2)

# SYSTEMS

## System Structure

The following system products must be used:

- SikaProof® A+ 12 sheet membrane
- SikaProof® Tape A+ self-adhesive tape for internal jointing
- SikaProof® Sandwich Tape for internal jointing

Alternative products:

- SikaProof® Tape-150 A self-adhesive tape for internal jointing

Ancillary products:

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

# TECHNICAL INFORMATION

## Resistance to Impact

882 N (no puncture) (ASTM E154)  
≥ 400 mm (EN 12691)

## Tensile Strength

Machine direction	≥ 750 N/50 mm	(EN 12311-2 Method A)
Cross Direction	≥ 750 N/50 mm	(EN 12311-2 Method A)
Load Strain	5.7 MPa	(ASTM D412)

## Modulus of Elasticity in Tension

≤ 35 N/mm<sup>2</sup> (-/+10 %) (EN ISO 527-3)

## Elongation

Machine direction	≥ 1100 %	(EN 12311-2 Method A)
Cross direction	≥ 1100 %	

>1400% (ASTM D412)

## Adhesion in Peel

≥ 2,00 N/mm	(to concrete after 28 d)	(EN 1372)
2.48 N-m		(ASTM D903)

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<b>Joint Peel Resistance</b>	3.62 N-m	(ASTM D1876)
<b>Joint Shear Resistance</b>	≥ 100 N/50 mm	(EN 12317-2)
<b>Watertightness</b>	Pass (Method B, 24 h/60 kPa) Pass, up to 7 bar	(EN 1928) (ASTM D5385)
<b>Resistance to lateral water migration</b>	Pass, up to 7 bar	(ASTM D5385 Modified)
<b>Water Vapour Transmission</b>	3.45 x 10 <sup>-9</sup> g/Pa.S.m <sup>2</sup> (0.06 perms)	(ASTM E96)
<b>Accelerated Ageing in Alkaline Environment</b>	Pass (28 d/23 °C) Pass (Method B, 24 h/60 kPa)	(EN1847) (EN1928)
<b>Durability of Watertightness against Chemicals</b>	Pass (28 d/23 °C) Pass (Method B, 24 h)	(EN 1847) (EN 1928)
<b>Durability of Watertightness against Ageing</b>	Pass (12 weeks) Pass (Method B, 24 h/60 kPa)	(EN 1847) (EN 1928)
<b>Reaction to Fire</b>	Class E	(EN 13501-1)

## APPLICATION INFORMATION

<b>Ambient Air Temperature</b>	5 °C min. / 45 °C max
<b>Substrate Temperature</b>	5 °C min. / 60 °C max

## BASIS OF PRODUCT DATA

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.

## FURTHER INFORMATION

- Sika® Method Statement: 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 Sika® Method Statement: SikaProof® A+ System for more detailed information.
- Do not install SikaProof® A+ 12 membrane during continuous or prolonged rain, snowfall or sandstorm.
- The substrate application surface must be clean with no standing water.
- If SikaProof® A+ 12 is 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 90 days after membrane system installation. Alternatively, concrete must be placed within 30 days after installation when using SikaProof® Tape-150 A.
- 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 (membrane side) must be protected with appropriate protection sheets 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 'Project Design' of the 'Sika® Method Statement: SikaProof® A+ System' or contact Sika® Technical Services for more information.

# ENVIRONMENT, HEALTH & SAFETY

## HAZARDOUS PRODUCT ACT - SECTION 2

This product is a manufactured article that does not require Safety Data Sheets to be marketed, transported or applied at the jobsite, according to the Hazardous Product Act - Section 2. Based on our current knowledge, this product is not classified as dangerous and does not contain any hazardous materials. Always wear personal protective equipment (including safety goggles and gloves) to manipulate and install Sika® products.

## 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 ( $\geq 12-15$  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

Strictly follow installation procedures as defined in method statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

#### Installation method - General

After substrate conditions have been fulfilled, the waterproofing membrane is installed by loose laying onto horizontal / inclined substrates or fastening onto vertical substrates. Overlap and transverse joints are sealed using self-adhesive tapes or thermally jointed using appropriate heating equipment.

#### Overlap and transverse joints

All overlap and transverse joints must be bonded and sealed either with cold applied SikaProof® Tape A+ or SikaProof® Sandwich Tape. Alternatively, all overlap and transverse joints can be bonded and sealed with SikaProof® Tape-150 A. Further, all overlap and transverse joints can be thermally jointed with appropriate hot air heating equipment.

#### Installation method - Detailing

Form all details and connections using the appropriate SikaProof® ancillary products outlined in the Sika® 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 the surface of the hybrid-bonding layer is clean.

#### Concrete placement

Place concrete directly onto or against the membrane within 90 days after installation. Alternatively, concrete must be placed within 30 days after installation when using SikaProof® Tape-150 A.

#### 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.

## 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 exact product data and uses.

## 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 recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. 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 or may be downloaded from our website at: [www.sika.ca](http://www.sika.ca)

### **Sika Canada Inc.**

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### **Other locations**

Boisbriand (Quebec)  
Brantford; Cambridge;  
Sudbury; Toronto (Ontario)  
Edmonton (Alberta)  
Surrey (British Columbia)

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