



PRODUCT DATA SHEET

SikaProof®-200

Pre-applied fully bonded FPO sheet waterproofing membrane for tunnels

PRODUCT DESCRIPTION

SikaProof®-200 is a fully bonded, pre-applied, two-layer waterproofing membrane for drained tunnels. It consists of a flexible polyolefin (FPO) base layer membrane with a hybrid bonding layer that forms a dual bond, chemical and mechanical, with the in-situ concrete lining.

WHERE TO USE

SikaProof®-200 is used for:

- Waterproofing of tunnels against water ingress

Please note:

- The Product is not suitable for permanent exposure to liquids with temperatures above +40 °C

CHARACTERISTICS / ADVANTAGES

- Easy to apply
- The hybrid bonding layer acts as a signal layer
- Suitable for contact with acidic (soft) water and alkaline environments
- Optimised flexibility, tensile strength and multi-axial elongation
- Flexible in cold temperatures
- Fully bonded to the concrete lining with a chemical and mechanical dual bond
- No lateral water underflow between the concrete structure and the membrane
- No need of waterstops

TECHNICAL INFORMATION

Resistance to Impact	Method A, 500 g falling weight	Watertight at 1000 mm drop height	(EN 12691)
Resistance to Static Puncture	3.3 kN ± 0.3 kN		(EN ISO 12236)
Tensile Strength	Longitudinal (MD)	17.0 N/mm ² ± 2.0 N/mm ²	(EN ISO 527-3)
	Transversal (CMD)	17.0 N/mm ² ± 2.0 N/mm ²	
Elongation at Break	Longitudinal (MD)	> 650 %	(EN ISO 527-3)
	Transversal (CMD)	> 650 %	
Burst Strength	D = 0.2 m	≥ 50 %	(EN 14151)
Dimensional Change after Heat	Longitudinal (MD), aged 6 hours at +80 °C	< 2 %	(EN 1107-2)
	Transversal (CMD), aged 6 hours at +80 °C	< 2 %	

Tear Strength	Longitudinal (MD), Method B: V = 50 mm/min	> 45 kN/m	(ISO 34-1)
	Transversal (CMD), Method B: V = 50 mm/min	> 45 kN/m	
Foldability	No cracks at -20 °C		(EN 495-5)
Coefficient of Thermal Expansion	$2.07 \times 10^{-4} \text{ K}^{-1}$		(ISO 11359-1)
Reaction to Fire	Class E		(EN 13501-1)
Chemical Resistance	Change in tensile strength and elongation, saturated lime wash, aged 56 days at +50 °C	< 10 % (MD/CMD)	(EN 14415)
	Change in tensile strength and elongation, 10 % sulphuric acid test, aged 56 days at +50 °C	< 10 % (MD/CMD)	
Resistance to UV Exposure	Not permanently UV stable		
Resistance to Weathering	Not resistant to permanent weathering		
Resistance to Oxidation	Change in tensile strength, aged 90 days at +85 °C	≤ 20 %	(EN 14575)
	Change in elongation, aged 90 days at +85 °C	≤ 20 %	
Microbiological Resistance	Change in tensile strength, aged 16 weeks	< 15 % (MD/CMD)	(EN 12225)
	Change in elongation, aged 16 weeks	< 15 % (MD/CMD)	
Service Temperature	Maximum	+40 °C	
	Minimum	-10 °C	
Adhesion in Peel	Peel strength on concrete, after 28 days	≥ 100 N/50 mm	(DIN EN 1372)
Water Permeability	$< 10^{-6} \text{ m}^3 \cdot \text{m}^{-2} \cdot \text{d}^{-1}$		(EN 14150)

PRODUCT INFORMATION

Composition / Manufacturing	Membrane: FPO/PE	
Packaging	Roll width	2 m
	Roll length	specified
	Refer to the current price list for available packaging variations.	
Shelf Life	18 months from date of production	
Storage Conditions	The Product must be stored in original unopened and undamaged sealed packaging in dry conditions and temperatures between +5 °C and +35 °C. Protect the Product from direct weather exposure. 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 the packaging.	

Appearance / Colour	Top layer surface texture	structured
	Bottom layer surface texture	smooth
	Top layer colour	whitish
	Bottom layer colour	black
Effective Thickness	Thickness including the functional layer: 2.4 mm Thickness of the waterproofing membrane: ≥ 2.0 mm	
Mass per unit area	2.30 kg/m ² (-0.11 kg/m ² / +0.23 kg/m ²)	(EN 1849-2)

SYSTEMS

System Structure

Ancillary products:

- Sika® FlexoDrain
- Sikaplan® Geotextiles
- Sika® Drains
- Sikaplan® W Tundrains
- Sikaplan® WP Drainage Angles
- Sikaplan® WT Disc
- Sikaplan® WT Tape System

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.

ENVIRONMENT, HEALTH & SAFETY

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

SUBSTRATE QUALITY

For information on substrate quality and pre-treatment, refer to the following Sika® method statement:

- SikaProof-200 for waterproofing mined tunnels

APPLICATION

IMPORTANT

Application by trained personnel

The application of this Product must only be carried out by an applicator that is trained or approved by Sika. The applicator must also be experienced in this type of application.

IMPORTANT

Ventilation in confined spaces

Always ensure good ventilation when applying the Product in a confined space.

For information on application, contact Sika Technical Services.

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

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Product Data Sheet

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