

## PRODUCT DATA SHEET

# Sikaplan® WP 1100-20 HL

2.0 mm thick PVC sheet waterproofing membrane for basements and tunnels

### DESCRIPTION

Sikaplan® WP 1100-20 HL is a flexible, 2.0 mm thick, homogeneous sheet waterproofing membrane. It contains a signal layer and is based on high-quality polyvinylchloride (PVC-p).

### USES

The product is designed for:

- Waterproofing of basements against water ingress
- Waterproofing of tunnels against water ingress

### CHARACTERISTICS / ADVANTAGES

- Part of the complete waterproofing membrane system
- Proven performance over decades
- Contains no recycled materials and no DEHP (DOP) plasticisers

- High resistance to ageing
- Good resistance to microbial degradation
- Good resistance to root penetration
- Suitable for contact with acidic (soft) water and alkaline environments
- Optimised flexibility, tensile strength and multi-axial elongation
- Optimised workability and thermally weldable

### APPROVALS / STANDARDS

- CE Marking and Declaration of Performance to EN 13491 - Geosynthetic barriers — Characteristics required for use as a fluid barrier in the construction of tunnels and underground structures
- CE Marking and Declaration of Performance to EN 13967 — Flexible sheets for waterproofing - Damp proofing and basement tanking

### PRODUCT INFORMATION

<b>Chemical base</b>	PVC-p	
<b>Packaging</b>	Roll width	2.2 m
	Roll length	20 m or specified
<b>Shelf life</b>	5 years from date of production	
<b>Storage conditions</b>	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 packaging.	
<b>Appearance / Colour</b>	Surface texture	smooth
	Signal layer colour	yellow
	Bottom layer colour	black

Effective thickness	2.0 mm (-0.1 mm / +0.2 mm)	(EN 1849-2)
Mass per unit area	2.6 kg/m <sup>2</sup> (-0.13 kg/m <sup>2</sup> / +0.26 kg/m <sup>2</sup> )	(EN 1849-2)

## TECHNICAL INFORMATION

Resistance to impact	Method A, 500 g falling weight	Watertight at 1000 mm drop height	(EN 12691)
Resistance to static load	No perforation at 20 kg for 24 h		(EN 12730)
Resistance to static puncture	2.35 kN ± 0.25 kN		(EN ISO 12236)
Tensile strength	Longitudinal (MD)	17 N/mm <sup>2</sup> ± 2 N/mm <sup>2</sup>	(EN ISO 527-3)
	Transversal (CMD)	16 N/mm <sup>2</sup> ± 2 N/mm <sup>2</sup>	
Elongation at break	Longitudinal (MD)	> 300 %	(EN ISO 527-3)
	Transversal (CMD)	> 300 %	
Burst strength	D = 1.0 m	≥ 80 %	(EN 14151)
Joint shear resistance	> 950 N/50mm		(EN 12317-2)
Service temperature	Minimum	-10 °C	
	Maximum	+35 °C	
Ambient maximum temperature of liquids	+35 °C		
Foldability at low temperature	No cracks at -20 °C		(EN 495-5)
Water tightness	Method B: 24 hours at 60 kPa	Pass	(EN 1928)
Chemical resistance	Change in tensile strength, 5-6 % sulphurous acid test, aged 90 days at +23 °C	< 20 %	(EN 1847)
	Foldability at low temperatures, 5-6 % sulphurous acid test, aged 90 days at +23 °C	No cracks at -20 °C	
	Change in tensile strength and elongation, saturated lime wash, aged 112 days at +50 °C	< 20 %	(EN 14415)
Behaviour after storage in warm water	Change in tensile strength, aged 360 days at +70 °C	< 20 %	(EN 14415)
	Change in elongation, aged 360 days at +70 °C	< 20 %	
	Change in mass, aged 360 days at +70 °C	< 4 %	
	Reduction of impact load, aged 360 days at +70 °C	≤ 30 %	
	Dimensional change, aged 360 days at +70 °C	< 2 %	

<b>Resistance to oxidation</b>	Change in tensile strength, aged 120 days at +80 °C	< 10 %	(EN 14575)
	Change in elongation, aged 120 days at +80 °C	< 10 %	
<b>Microbiological resistance</b>	Change in tensile strength, aged 16 weeks	< 15 %	(EN 12225)
	Change in elongation, aged 16 weeks	< 15 %	
<b>Durability of water tightness against chemicals</b>	Calcium hydroxide, aged 28 days at +23 °C, tested 24 hours at 60 kPa	Pass	(EN 1847)
<b>Resistance to UV exposure</b>	Not permanently UV stable		
<b>Resistance to weathering</b>	Not resistant to permanent weathering		
<b>Dimensional change after heat</b>	Longitudinal (MD), aged 6 hours at +80 °C	< 2 %	(EN 1107-2)
	Transversal (CMD), aged 6 hours at +80 °C	< 2 %	
<b>Durability of water tightness against ageing</b>	Aged 12 weeks at +70 °C, tested 24 hours at 60 kPa	Pass	(EN 1296)
<b>Reaction to fire</b>	Class E		(EN 13501-1)

## SYSTEM INFORMATION

### System structure

#### Ancillary products:

- Sika® FlexoDrain
- Sikaplan® Geotextiles
- Sika® Drains
- Sika® W Tundrains
- Sikaplan® WP Drainage Angles
- Sikaplan® WP Disc
- Sika® Waterbars WP
- Sikaplan® WP Tape
- Sikaplan® WP Control Sockets
- Sikaplan®-8 Separation
- Sikaplan® WP Trumpet Flange
- Sika® Anchors
- Sikaplan® WP Protection Sheets

## BASIS OF PRODUCT DATA

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.

## ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

## APPLICATION INSTRUCTIONS

### IMPORTANT

#### Strictly follow installation procedures

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

### SUBSTRATE QUALITY

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

- Sikaplan® WP sheet membrane (PVC) system for waterproofing basements and other below ground structures
- Sikaplan® WP sheet membrane (PVC) system for wa-

terproofing tunnels

## APPLICATION METHOD / TOOLS

For information on application, refer to the following Sika® method statement:

- Sikaplan® WP sheet membrane (PVC) system for waterproofing basements and other below ground structures
- Sikaplan® WP sheet membrane (PVC) system for waterproofing tunnels

### IMPORTANT

#### Application by trained personnel

The application of this product must only be carried out by Sika® trained and/or approved contractors, experienced in this type of application.

### IMPORTANT

#### Ventilation in confined spaces

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

### IMPORTANT

#### Not resistant to bitumen and plastics

The product is not resistant to permanent contact with bitumen and some types of plastics other than PVC.

- For use over or adjacent to these materials, apply a separation layer of polypropylene geotextile ( $\geq 150$  g/m<sup>2</sup>).

## 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 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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