



## PRODUCT DATA SHEET

# Sikaplan® WP 1100-25 HL2

2,5 MM THICK PVC SHEET WATERPROOFING MEMBRANES FOR BASEMENTS AND TUNNELS WITH A THIN SIGNAL LAYER

### PRODUCT DESCRIPTION

Sikaplan® WP 1100-25 HL2 is a flexible, 2.5 mm thick, homogeneous sheet waterproofing membrane. It contains a ≤ 0.2 mm thick signal layer and is based on high-quality polyvinylchloride (PVC-p).

### WHERE TO USE

The Product is designed for:

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

### CHARACTERISTICS / ADVANTAGES

- Certified for öBV tunnel guidelines, table 4.6 and table 4.7
- Contains no recycled materials and no DEHP (DOP) plasticisers
- Proven performance over decades
- High resistance to ageing
- Good resistance to microbial degradation
- Good resistance to root penetration

### PRODUCT INFORMATION

<b>Composition / Manufacturing</b>	PVC-p	
<b>Packaging</b>	Roll width	2 m
	Roll length	specified
<b>Shelf Life</b>	5 years from date of production	

- Flexible in cold temperatures
- Suitable for contact with acidic (soft) water and alkaline environments
- Optimised flexibility, tensile strength and multi-axial elongation
- Optimised workability and thermally weldable

### APPROVALS / CERTIFICATES

- 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
- Meets the requirements according to the öBV Directive "Tunnelabdichtung", table 4-6, issued in December 2012
- Meets the requirements according to the öBV Directive "Tunnelabdichtung", table 4-7, issued in December 2012
- Fulfils the requirements of annex C.5 of SIA 272:2009

**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 packaging.

**Appearance / Colour**

Surface texture	smooth
Signal layer colour	yellow
Bottom layer colour	black

**Dimensions**

<b>Effective Thickness</b>	2.50 mm (-0.12 mm / +0.25 mm) including signal layer	(EN 1849-2)
	Signal layer thickness	≤ 0.2 mm

<b>Mass per unit area</b>	3.25 kg/m <sup>2</sup> (-0.16 kg/m <sup>2</sup> / +0.32 kg/m <sup>2</sup> )	(EN 1849-2)
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**TECHNICAL INFORMATION**

<b>Resistance to Impact</b>	Method A, 500 g falling weight	Watertight at 750 mm drop height	(EN 12691)
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<b>Resistance to Static Puncture</b>	> 2.5 kN		(EN ISO 12236)
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<b>Long Term Compression Strength</b>	Water tightness, aged 48 hours	Watertight at 7.0 N/mm <sup>2</sup>	(öBV-Guideline Tunnel Waterproofing:2012)
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<b>Tensile Strength</b>	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>	
	Longitudinal (MD)	17 N/mm <sup>2</sup> ± 2 N/mm <sup>2</sup>	(EN 12311-2)
	Transversal (CMD)	16 N/mm <sup>2</sup> ± 2 N/mm <sup>2</sup>	

<b>Modulus of Elasticity in Tension</b>	Longitudinal (MD)	≤ 20 N/mm <sup>2</sup>	(EN ISO 527-3)
	Transversal (CMD)	≤ 20 N/mm <sup>2</sup>	

<b>Elongation at Break</b>	Longitudinal (MD)	> 300 %	(EN ISO 527-3)
	Transversal (CMD)	> 300 %	

<b>Burst Strength</b>	D = 1.0 m	≥ 80 %	(EN 14151)
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<b>Service Temperature</b>	Minimum	-10 °C
	Maximum	+35 °C

<b>Ambient Maximum Temperature of Liquids</b>	+35 °C
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<b>Foldability</b>	No cracks at -20 °C	(EN 495-5)
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<b>Watertightness</b>	Method B: 24 hours at 60 kPa	Pass	(EN 1928)
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<b>Water Permeability</b>	< 10 <sup>-6</sup> m <sup>3</sup> ·m <sup>-2</sup> ·d <sup>-1</sup>	(EN 14150)
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<b>Chemical Resistance</b>	Change in tensile strength and elongation, 0.5 % sulphuric acid test, aged 360 days at +50 °C	< 20 %	(EN 1847)
	Change in mass, 0.5 % sulphuric acid, aged 360 days at +50 °C	< 4 %	
	Change in tensile strength, 5-6 % sulphurous acid test, aged 90 days at +23 °C	< 20 %	
	Foldability at low temperatures, 5-6 % sulphurous acid test, aged 90 days at +23 °C	No cracks at -20 °C	
	Change in impact load, 0.5 % sulphuric acid, aged 360 days at +50 °C	≤ 30 %	(EN 1847; EN 12691)
	Change in impact load, saturated lime wash, aged 360 days at +50 °C	≤ 30 %	
	Change in tensile strength and elongation, saturated lime wash, aged 360 days at +50 °C	< 20 %	(EN 14415)
	Change in mass, saturated lime wash, aged 360 days at +50 °C	< 4 %	
<b>Behaviour after Storage in Warm Water</b>	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 90 days at +85 °C	< 10 %	(EN 14575)
	Change in elongation, aged 90 days at +85 °C	< 10 %	
	Foldability at low temperatures, aged 90 days at +85 °C	No cracks at -20 °C	
<b>Microbiological Resistance</b>	Change in tensile strength, aged 16 weeks	< 15 %	(EN 12225)
	Change in elongation, aged 16 weeks	< 15 %	
<b>Durability of Watertightness 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>Behaviour after heat welding</b>	Behaviour of weld in shear test	Break occurs outside the seam	(EN 12317-2)
	Peel resistance of welded seam	> 6.0 N/mm	(EN 12316-2)
<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 %	
	Blisters, aged 6 hours at +80 °C	No blisters	
<b>Durability of Watertightness 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)

## SYSTEMS

<b>System Structure</b>	The Product is part of Sikaplan® WP compartmentalised waterproofing system.		
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## 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

### 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 waterproofing tunnels

### APPLICATION

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.

1. For use over or adjacent to these materials, apply a separation layer of polypropylene geotextile ( $\geq 150 \text{ g/m}^2$ ).

## 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)

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### Other locations

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

### Product Data Sheet

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