

PRODUCT DATA SHEET

Sikaplan® WP 1100-25 HL2

2.5 mm thick PVC sheet waterproofing membrane 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).

USES

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

Chemical Base	PVC-p	
Packaging	Roll width	2 m
	Roll length	specified
Shelf Life	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 / 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
- 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 / Color

Surface texture	smooth
Signal layer colour	yellow
Bottom layer colour	black

Effective Thickness

98 mils (- 5 mils / + 10 mils) including signal layer: ≤ 7.8 mils	(ASTM D 374)
2.50 mm (-0.12 mm / +0.25 mm) including signal layer: ≤ 0.2 mm	(EN 1849-2)

Mass per Unit Area

3.25 kg/m ² (-0.16 kg/m ² / +0.32 kg/m ²)	(EN 1849-2)
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SYSTEM INFORMATION**System Structure**

The Product is part of Sikaplan® WP compartmentalised waterproofing system.

TECHNICAL INFORMATION**Impact Strength**

Method A, 500 g falling weight	Watertight at 750 mm drop height	(EN 12691)
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Resistance to Static Puncture

> 2.5 kN	(EN ISO 12236)
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Resistance to Dynamic Puncture

29.4 (39.9) ft-pd (J)	(ASTM D5635)
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Long Term Compression Strength

Water tightness, aged 48 hours	Watertight at 7.0 N/mm ²	(öBV-Guideline Tunnel Waterproofing:2012)
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Tensile Strength

2,500 psi		(ASTM D638)
Longitudinal (MD)	17 N/mm ² ± 2 N/mm ²	(EN ISO 527-3)
Transversal (CMD)	16 N/mm ² ± 2 N/mm ²	
Longitudinal (MD)	17 N/mm ² ± 2 N/mm ²	(EN 12311-2)
Transversal (CMD)	16 N/mm ² ± 2 N/mm ²	

Tensile Modulus of Elasticity

Longitudinal (MD)	≤ 20 N/mm ²	(EN ISO 527-3)
Transversal (CMD)	≤ 20 N/mm ²	

Elongation at Break

> 300 %		(ASTM D638)
Longitudinal (MD)	> 300 %	(EN ISO 527-3)
Transversal (CMD)	> 300 %	

Burst Strength

D = 1.0 m	≥ 80 %	(EN 14151)
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Tear Strength

> 31 lbs	(ASTM D1004)
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Service Temperature

Minimum	-10 °C
Maximum	+35 °C

Ambient Maximum Temperature of Liquids	+35 °C		
Low Temperature Bend	No cracks at -20 °C		(EN 495-5)
Low Temperature Bend	pass at -20 °F (impact)		(ASTM D1593/D1790)
Water Tightness	Method B: 24 hours at 60 kPa	Pass	(EN 1928)
Water permeability	< 10 ⁻⁶ m ³ ·m ⁻² ·d ⁻¹		(EN 14150)
Chemical Resistance	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 %	
Behavior 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 %	

Resistance to Oxidation	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	
Microbiological Resistance	Change in tensile strength, aged 16 weeks	< 15 %	(EN 12225)
	Change in elongation, aged 16 weeks	< 15 %	
Durability of Water Tightness against Chemicals	Calcium hydroxide, aged 28 days at +23 °C, tested 24 hours at 60 kPa	Pass	(EN 1847)
UV Exposure	Not permanently UV stable		
Resistance to Weathering	Not resistant to permanent weathering		
Behaviour after heat welding	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)
	Peel resistance of welded seam	135 lbs	(ASTM D3163)
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 %	
	Blisters, aged 6 hours at +80 °C	No blisters	
Durability of Water Tightness against Ageing	Aged 12 weeks at +70 °C, tested 24 hours at 60 kPa	Pass	(EN 1296)
Reaction to Fire	Class E		(EN 13501-1)

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

ENVIRONMENTAL, HEALTH AND SAFETY

This product is an article as defined in article 3 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. A safety data sheet following article 31 of the same regulation is not needed to bring the product to the market, to transport or to use it. For safe

use follow the instructions given in the product data sheet. Based on our current knowledge, this product does not contain SVHC (substances of very high concern) as listed in Annex XIV of the REACH regulation or on the candidate list published by the European Chemicals Agency in concentrations above 0,1 % (w/w).

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 (≥ 150 g/m²).

OTHER RESTRICTIONS

See Legal Disclaimer.

LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data

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Product Data Sheet

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Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

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