BUILDING TRUST

PRODUCT DATA SHEET

Sikaplan® WP 1100-20 HL

2.0 mm thick PVC sheet waterproofing membrane for basements and tunnels

PRODUCT 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

Sikaplan® WP 1100-20 HL is used 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 based on EN 13491:2004/A1:2006 Geosynthetic barriers — Characteristics required for use as a fluid barrier in the construction of tunnels and underground structures
- CE marking and declaration of performance based on EN 13967:2012 Flexible sheets for waterproofing — Plastic and rubber damp proof sheets including plastic and rubber basement tanking sheet — Definitions and characteristics

PRODUCT INFORMATION

Chemical Base	PVC-p	
Packaging	Roll width	2.0 m
	Roll length	20 m or specified
	Rolls are wrapped in PE film. Refer to the current price list for available packaging variations.	
Shelf Life	5 years 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 / Color	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	2.60 kg/m² (-0.13 kg/m² / +0.26 kg/m²)		(EN 1849-2)

SYSTEM INFORMATION

System Structure

Ancillary products:
- Sika® FlexoDrain
- Sikaplan® Geotextiles
- Sika® Drains
- Sika® W Tundrains
- Sikaplan® WP Drainage Angles
- Sikaplan® WP Disc
- Sika® WP Waterbars
- Sikaplan® WP Tape System
- Sikaplan® WP Control Socket
- Sikaplan®-8 Separation
- Sikaplan® WP Trumpet Flange
- Sika® Anchors
- Sikaplan® WP Protection Sheets

TECHNICAL INFORMATION

Impact Strength	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)
Resistance to Root Penetration	Pass		(CEN/TS 14416)
Tensile Strength	Longitudinal (MD)	17 N/mm² ± 2 N/mm²	(EN ISO 527-3)
	Transversal (CMD)	16 N/mm² ± 2 N/mm²	
	Longitudinal (MD)	17 N/mm² ± 2 N/mm²	(EN 12311-2)
	Transversal (CMD)	16 N/mm² ± 2 N/mm²	
Elongation at Break	Longitudinal (MD)	> 300 %	(EN ISO 527-3)
	Transversal (CMD)	> 300 %	
Burst Strength	Maximum burst stress	6.0 N/mm² ± 0.6 N/mm²	(DIN 61551)
	Elongation at break	> 70 %	
Resistance to Tearing (nail shank)	Longitudinal (MD)	≥ 450 N	(EN 12310-1)
	Transversal (CMD)	≥ 450 N	
Joint Shear Resistance	> 950 N/50mm		(EN 12317-2)
Service Temperature	Maximum	+35 °C	
	Minimum	-10 °C	

Low Temperature Bend	No cracks at -20 °C		(EN 495-5)
Water Tightness	Method B, 24 hours at 60 kPa	Pass	(EN 1928)
Water permeability	< 10^{-6} $m^3 \cdot m^{-2} \cdot d^{-1}$		(EN 14150)
Chemical Resistance	Change in tensile strength and elongation, saturated lime wash, aged 112 days at +50 °C	< 20 %	(EN 14415)
	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	
Behavior after Storage in Warm Water	Change in elongation, aged 360 days at +70 °C	< 20 %	(EN 14415)
	Change in mass, aged 360 days at +70 °C	< 4 %	
	Change in tensile strength, aged 360 days at +70 °C	< 20 %	
	Dimensional change, aged 360 days at +70 °C	< 2 %	
	Reduction of impact load, aged 360 days at +70 °C	≤ 30 %	
Resistance to Oxidation	Change in tensile strength, aged 120 days at +80 °C	< 10 %	(EN 14575)
	Change in elongation, aged 120 days at +80 °C	< 10 %	
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	No failure of the joint	(EN 12316-2)

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 %	
Durability of Water Tightness against Ageing	Aged 12 weeks at +70 °C, tested 24 hours at 60 kPa	Pass	(EN 1296)

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

SUBSTRATE QUALITY

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

- Sikaplan® WP sheet membrane (PVC) system for waterproofing basements
- Sikaplan® WP sheet membrane (PVC) system for waterproofing tunnels

APPLICATION

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

- Sikaplan® WP sheet membrane (PVC) system for waterproofing basements
- 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 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.
IMPORTANT
Avoid permanent contact with 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 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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