BUILDING TRUST

PRODUCT DATA SHEET

Sikaplan® WT 1200-16 C

SHEET WATERPROOFING MEMBRANE for BASEMENT AND TUNNELs

DESCRIPTION

Sikaplan® WT 1200-16 C is a flexible homogeneous sheet waterproofing membrane with a glass fibre reinforceing inlay, based on premium quality flexible polyolefine (FPO).

USES

Waterproofing of basements and cut-and-cover structures against groundwater

CHARACTERISTICS / ADVANTAGES

- High resistance to ageing
- Optimized flexibility, tensile strength and multi-axial elongation
- Resistant to temporary UV exposure
- Resistant to root penetration and micro-organisms
- Resistant to permanent water temperature of max. +40 °C
- Flexible in cold temperatures
- High dimensional stability under permanent pressure and heat
- High resistance to mechanical influences
- Suitable for contact with acidic soft water and alkaline environment
- Thermal weldable
- Can be installed on damp and wet substrates
- Bitumen resistant

APPROVALS / STANDARDS

Product Declaration EN 13491, EN 13967. CE-Certificate No. 1213-CPD-017 and CE-Certificate No. 1213-CPD-016

PRODUCT INFORMATION

Product Declaration	EN 13967 EN 13491	(1213-CPD-016) (1213-CPD-017)
Packaging	Roll size	2.00 m (width) x 20.00 m (length) Or roll length individually as specified by agreement
	Unit weight	1.63 kg/m²

Appearance / Colour	Sheet membrane, stabilized with inlay. Surface Membrane thickness Colour	 smooth 1.60 mm signal layer: green bottom layer: black	
Shelf Life	5 years shelf life from date of production if stored properly in undamaged, unopened, original sealed packaging		
Storage Conditions	Rolls must be stored in their original packaging, in a horizontal position and in cool and dry conditions. They must be protected from direct sun-light, rain, snow and ice, etc. Do not stack pallets of rolls during transport or storage.		
Visible Defects	Pass		(EN 1850-2)
Effective Thickness	1.60 (-5 /+10 %) mm		(EN 1849-2)
Straightness	≤ 50 mm/10 m		(EN 1848-2)
Mass per Unit Area	1.63 (-5 / +10 %) kg/m²		(EN 1849-2)

TECHNICAL INFORMATION

Tensile Strength	machine direction cross direction	≥ 9.50 N/mm² ≥ 8 N/mm²	(EN12311-2)
	machine direction cross direction	≥ 8 N/mm² ≥ 7 N/mm²	(ISO 527)
Elongation	≥ 450 % (machine and cross direction)		(EN12311-2)
	≥ 400 % (machine and cross direction)		(ISO 527)
Resistance to Static Puncture	≥ 2.2 kN		(EN ISO 12236)
Resistance to Impact	Watertight at 500 mm drop height (Method A, 500 g falling weight)		(EN 12691)
Resistance to Static Load	≥ 20kg (Method B, 24h/ 20 kg)		(EN 12730)
Water Vapour Transimission	80 000 (± 20 000) µ (+23 °C/ 75 % r. h)		(EN 1931)
Water Tightness	Pass (Method B, 24h/ 60 kPa)		(EN 1928)
Foldability at Low Temperature	No cracks at -20 °C		(EN 495-5)
Resistance to tear (nail shank)	≥ 500 N		(EN 12310-1)
Joint Shear Resistance	≥ 650 N/ 50 mm		(EN 12317-2)
Resistance to Oxidation	Change of tensile strength Change in elongation	≤ 25 % ≤ 25 %	(EN 14575) (90 d /85 °C)
Durability of Water Thightness against Ageing	Pass (Method B, 24h/ 60 kPa) (12 weeks)		(EN 1296) (EN 1928)
Durability of Water Tightness against Chemicals	Pass (24h/ 60 kPa) (28 d /+ 23 °C)		(EN 1847) (EN 1928)
Accelerated Ageing in Alkaline Environment Tensile Strength	Pass (Appendix C, 24 weeks / +90 °C)		(EN 12311-2)
Resistance to Environmental Stress Cracking	≥ 200h		(EN 14576)(ASTM D 5397-99)

Resistance to UV Exposure	350 MJ/m²	(EN 12224)
Resistance to Weathering	Remaining tensile strength ≥ 75 % (350 MJ/ m²) and elongation:	(EN 12224)
Reaction to Fire	Class E	(EN ISO 11925-2)
Exposure to Bitumen	Pass (Method A, 28 d /+70°C)	(EN 1928)(EN 1548)
Service Temperature	-10 °C min. / +40 °C max.	
Ambient Maximum Temperature of Liquids	+40 °C	

SYSTEM INFORMATION

System Structure

Ancillary Products:
- Sikaplan® WT Disc
- Sikaplan® WT Fixation Plate PE
- Sikaplan® W Felt PP
- Sikaplan® W Tundrain
- Sikaplan® WT Protection Sheets
- Sika®Waterbar WT for waterproofing of concrete joints and fixations

APPLICATION INFORMATION

Ambient Air Temperature

+5 °C min. / +45 °C max. For installation below +5 °C ambient temperature, special measures are required in accordance with relevant national regulations and Sika guidelines.

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.

LIMITATIONS

- Installation works must only be carried out by Sika® trained contractors, experienced in the lining of tunnels and underground structures.
- Particular protective precautions must be taken in wet conditions, at temperatures below +5 °C as well as at a relative air humidity of more than 80 %. The effectiveness of the measures must be proven separately.
- Fresh air ventilation must always be ensured, when working (welding) in closed roomsand in accordance with all relevant local regulations.
- The membrane is not UV stabilized and cannot be installed on structures permanently exposed to UV light and weathering.

ECOLOGY HEALTH AND SAFETY

REGULATION (EC) NO 1907/2006 - REACH

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 this 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

In-situ concrete: Clean, sound and dry, homogeneous, free from oils and grease, dust and loose or friable particles.
Shotcrete: The profile of the shotcrete surface must not exceed a ratio of length to depth of 10:1 and its min. radius must be 20 cm. The shotcrete surface must not contain broken aggregates. Any leaks shall be sealed with Sika® waterproof plugging mortar, or drained with Sika® FlexoDrain. Where necessary to achieve the desired profile/surface, apply a fine sprayed concrete layer on the shotcrete surface with a min. thickness of 3-5 cm and aggregate diameter not exceeding 8 mm. Steel (girders, reinforcement mesh, anchors, etc.) must also be covered with a minimum of 4 cm fine sprayed concrete. The shotcrete surface must be cleaned (no loose stones, nails, wires, etc.). Over and above, a polypropylene geotextile (≥ 500 g/m2) or a compatible drainage layer must be installed prior to the membrane application.

APPLICATION METHOD / TOOLS

The membrane is installed loose laid and mechanically fastened, or loose laid and ballasted in accordance with the separate Sika Method Statement for sheet waterproofing membrane installations. The jointing faces must be dry and free from contaminations. For polluted membranes, follow the Sika Method Statement. Sarnafil® T Prep must be used for the seam preparation unless the coat influenced by weather conditions and/or oxidation is pressed out of the area of the joining faces during the welding, e.g. by the heated wedge. Clean, freshly unpacked rolls can be automatic heat welded without any preparation. All membrane overlaps shall be welded by using hand welding guns and pressure rollers or automatic heat welding machines, with individually adjustable and electronically controlled welding temperatures (such as the manual Leister Triac PID / automatic: Leister Twinny S / semi-automatic: Leister Triac Drive). Welding parameters, such as speed and temperature shall be established with trials on site, prior to any welding works. The execution of T-joints demands particular preparation of the weld area; on the already fabricated weld the overlaps must be machined off carefully.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

LEGAL NOTES

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