

Sikaplan® WP 1120 – 15HL

Sheet waterproofing membrane for Basements and Tunnels

Construction

Product Description

Sikaplan® WP 1120-15HL is a homogeneous sheet waterproofing membrane, with a 0.5 mm thick signal layer, based on polyvinylchloride (PVC-P).

Uses

- Waterproofing of all kinds of below ground structures against groundwater

Characteristics / Advantages

- Resistant to ageing
- Optimized tensile strength and elongation
- UV-stable (350 MJ/m² acc. to EN 12224)
- Resistant to root penetration
- Resistant to permanent water temperature of max. +30 °C
- Dimensional stable
- Without DEPH (DOP) plasticiser
- Flexible in cold temperatures
- Heat weldable
- Can be installed on wet substrates
- Suitable for contact with acidic soft water (low pH aggressive to concrete surfaces)
- Not bitumen resistant

Tests

Approval / Standards

Tested according to various EN standards

This product is not released and certified for the end use in EC countries.

Product Data

Form

Appearance / Colours

Rolled sheet membrane, homogeneous.

Surface: smooth

Membrane thickness: 1.50 mm (incl. signal layer 0.50mm)

Colour: signal layer: yellow / bottom layer: dark-grey

Packaging

Roll size: 2.00 m (roll width) x 20.00 m (roll length).

Unit weight: 1.92 kg/m²



Storage

Storage Conditions	Rolls must be stored in their original package, in horizontal position and under cool and dry conditions. They must be protected from direct sunlight, rain, snow and ice, etc. The product does not expire during correct storage. Do not stack pallets of rolls during transport or storage.
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Technical Data

Product declaration	Not available	(mandatory when use in European countries)
Visible defects	Pass	EN 1850 - 2
Straightness	≤ 75 mm / 10 m	EN 1848 - 2
Mass per unit area	1.92 (-5 / + 10%) kg/m ²	EN 1849 - 2
Thickness	1.50 (-5 / + 10%) mm	EN 1849 - 2
Water tightness to liquid water	Pass	EN 1928 B (24h / 60kPa)
Resistance to impact	≥ 450 mm	EN 12691 : 2005
Durability of water tightness against ageing	Pass	EN 1296 (12 weeks); EN 1928 B (24h / 60kPa)
Durability of water tightness against chemicals	Pass	EN 1847 (28 d / +23 °C); EN 1928 B (24h / 60kPa)
Accelerated ageing in an alkaline environment, tensile strength	Pass	Appendix C (24 weeks / +90 °C); EN 12311 - 2
Bitumen compatibility	No performance determined	EN 1548 (28 d / +70 °C); EN 1928 A
Resistance to tear (nail shank)	≥ 450 N	EN 12310 - 1
Joint strength	≥ 800 N / 50mm	EN 12317 - 2
Tensile strength, machine direction	≥ 14.5 N / mm ²	EN 12311 - 2
Tensile strength, cross direction	≥ 14.5 N / mm ²	EN 12311 - 2
Elongation, machine direction	≥ 290 %	EN 12311 - 2
Elongation, cross direction	≥ 290 %	EN 12311 - 2
Water vapour transmission	18 000 μ (+ / - 5000)	EN 1931 (+ 23 °C / 75% r. h)
Resistance to static load	≥ 20 kg	EN 12730 (Method B, 24h / 20kg)
Reaction to fire	Class E	EN 13501 - 1

System Information

System Structure	Ancillary Products: <ul style="list-style-type: none">- Sikaplan® WP laminated metal for fixing pieces- Sikaplan® WP Disc 80/10 mm for fixing pieces- Sika® Waterbar, Type AR and Type DR for fixing pieces and waterproofing concrete joints
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Application Details

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 5 : 1 and its min. radius must be 20 cm. The shotcrete surface must not contain broken aggregates. Where necessary to achieve the desired profile/surface, apply a fine gunite layer on the shotcrete surface with a minimum thickness of 5 cm and aggregate diameter not exceeding 4 mm. Steel (girders, reinforcement mesh, anchors etc.) must also be covered with a minimum 5 cm of gunite. The surface of the shotcrete and gunite must be cleaned (no loose stones, nails, wires, etc.).

Application Conditions / Limits

Substrate Temperature 0°C min. / +35°C max.

Ambient Air Temperature +5°C min. / +35°C max.

Ambient max. Temperature of Liquids +30°C (water)

Application Instructions

Application Method / Tools

Installation method:
Loose laid and mechanically fastened, or loose laid and ballasted in accordance with the separate Sika Method Statement for sheet waterproofing membrane installations.

All membrane overlaps must be welded i.e. 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 must be established with trials on site, prior to any welding works.

Notes on Application / Limits

This product must only be used by Sika approved contractors.

The membrane is not resistant to permanent contact with materials including bitumen, and plastics other than PVC; on these it requires a separation layer of geotextile (> 300 g/m²).

Sikaplan® WP 1120 – 15HL is not suitable as membrane for below ground structures against groundwater, when exposed to permanent water temperature exceeding + 30°C and when exposed to polluted, or waste waters in ground.

The watertightness of the structure must be tested and approved after completion of the membrane installation works according to the requirements of the client's specifications.

The membrane is not UV stabilised and can not be installed on structures permanently exposed to UV light and weathering.

Value Base

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.

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.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

Protective Measures

Fresh air ventilation must be ensured, when working (welding) in closed rooms. Local safety regulations must be observed.

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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