

Product Data Sheet

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Sikaplan® WP 5140-15H

**EN 13361****04****1349****Sikaplan® WP 5140 – 15H**

(Mipoplast® 2052/85, 1,50mm)

Sheet waterproofing membrane – Pit- and pond liner**Product****Description**

Sikaplan® WP 5140-15H is a homogeneous sheet waterproofing membrane, based on polyvinylchloride (PVC-P).

Uses

- Waterproofing of ponds and pools for non-potable water
- Lining of artificial lakes, leisure ponds and biotopes

Characteristics / Advantages

- Resistant to ageing
- Optimized tensile strength and elongation
- UV-stable (350 MJ/m² acc. to EN 12224)
- Resistant to root penetration and microbial attack
- Resistant to permanent water temperature of max. +30°C
- Dimensional stable
- Without DEHP (DOP) plasticiser
- Flexible in cold temperatures
- Heat weldable
- Can be installed on wet substrates and on compacted soil
- Not bitumen resistant

Tests**Approval / Standards**

Homogeneous waterproofing membrane, PVC-P based, according to EN 13361 for use in the construction of reservoirs and dams.

DoP 020704501400150000 1011, certified by the Factory Production Control Body, 1349, and provided with the CE Mark.

Product Data**Form****Appearance / Colours**

Rolled sheet membrane, homogeneous.

Surface: smooth

Membrane thicknesses: 1.50 mm

Colour: black

Packaging

Roll sizes: 2.00 m (roll width) x 15.00 m - 300.00 m (roll lengths)

Unit weight: 1.97 kg/m²**Construction**

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	EN 13361: (2004) mandatory only for European countries	1213-CPD-027
Thickness	1.50 (-5 / + 10%) mm	EN 1849 - 2
Mass per unit area	1.97 (-5 / + 10%) kg/m ²	EN 1849 - 2
Thermal expansion	190 x 10 ⁻⁶ (± 50 x 10 ⁻⁶) 1/K	ASTM D 696 - 91
Water permeability	≤ 10 ⁻⁷ m ³ x m ⁻² x d ⁻¹	EN 14150
Tensile strength	Machine: 20.00 (± 5.0) N / mm ² Cross: 20.00 (± 5.0) N / mm ²	ISO 527 -1/3/5 ISO 527 -1/3/5
Tear strength	Machine: ≥ 40 kN/m Cross: ≥ 40 kN/m	ISO 34, method B; V = 50mm/min ISO 34, method B; V = 50mm/min
Elongation	Machine: ≥ 280% Cross: ≥ 280%	ISO 527 -1/3/5 ISO 527 -1/3/5
Burst strength	≥ 50%	EN 14151, D=1.00m
Static puncture	1.85 (± 0.15) kN	EN ISO 12236
Low temperature behaviour	≤ - 20°C	EN 495 - 5
Weathering	Remaining tensile strength and elongation ≥ 75%	EN 12224, 350 MJ/m ² ; ISO 527 - 3/5/100
Micro organism	Change of tensile strength: ≤ 15% Change of elongation: ≤ 15%	EN 12225, ISO 527 - 3/5 EN 12225, ISO 527 - 3/5
Oxidation	Change of tensile strength: ≤ 25% Change of elongation: ≤ 25%	EN 14575, ISO 527 - 3/5 EN 14575, ISO 527 - 3/5
Environmental stress cracking	This method of testing is only suitable for flexible polyolefin (FPO) based materials	ASTM D 5397 - 99
Leaching (water soluble)	A (hot water): change of elongation: ≤ 15% B (alkaline liquid): change of elongation: ≤ 15% C (organic alcohol): change of elongation: no performance determined	EN 14415 EN 14415 EN 14415
Resistance to root penetration	Pass	EN 14416

System Information

System Structure	Ancillary Products: <ul style="list-style-type: none">- Sikaplan® WP laminated metal for fixing pieces- Sikaplan® W Flat profile stainless steel for fixing pieces- Sikaplan® WP Fixation Plate PVC for fixing pieces
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Application Details

Substrate Quality	<p>Concrete (new or existing), old linings and completely cured pool coatings: Clean and dry, homogeneous, free from oil and grease, dust and loose, friable particles. Paint, cement laitance and other poorly adhering materials must be removed.</p> <p>Soil: The excavated soil, or dam fill must be compacted to Proctor value min. 95%. Broken aggregates, crushed stones and roots on soil surface must be removed. To allow adequate dewatering under the waterproofing membrane, the soil must be sloped to $\geq 4\%$ and must be covered with a filter layer of fine gravel (dia. $\leq 4\text{mm}$ / thickness 5cm). A cushion layer of (non woven fabric) geotextile with min. density of 500g/m^2 must then be laid on top of prepared substrate, prior to membrane installation.</p>
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	<p>Installation method: Loose laid and mechanically fixed according to relevant method statement.</p> <p>All membrane overlaps must 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).</p> <p>Welding parameters, such as speed and temperature must be established with trials on site, prior to any welding works.</p>
Notes on Application / Limits	<p>Installation works with this product shall only be carried out by Sika trained contractors with experience in lining of pits and ponds.</p> <p>Sikaplan® WP 5140 – 15H is not suitable as membrane in ponds, when exposed to permanent water temperature exceeding + 30°C and when exposed to polluted, or waste waters.</p> <p>The membrane colour might change under permanent influence of UV-light within and above area of permanent water surface level, if not properly covered with soil material.</p> <p>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 ($> 300\text{g/m}^2$).</p> <p>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.</p>
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	This product is an article within the meaning of Article 3.3 of Regulation (EC) No. 1907/2006. A safety data sheet following EC- Regulation 1907/2006, article 31 is not needed to bring the product to the market to transport or use it. The product does not damage the environment when used as specified.
REACH	<p>European Community Regulation on chemicals and their safe use (REACH: EC 1907/2006)</p> <p>This product is an article within the meaning 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. Therefore, there are no registration requirements for substances in articles within the meaning of Article 7.1 of the Regulation.</p> <p>Based on our current knowledge, this product does not contain SVHC (substances of very high concern) from the candidate list published by the European Chemicals</p>

	Agency in concentrations above 0.1 % (w/w).
Protective Measures	Fresh air ventilation must be ensured, when working (welding) in closed rooms. Local safety regulations must be observed.
Transportation Class	The product is not classified as hazardous good for transport.
Disposal	The material is recyclable. Disposal must be according to local regulations. Please contact your local Sika sales organisation for more information.
Legal Notes	<p>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.</p>



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