

## PRODUCT DATA SHEET

# Sikaplan® WT 4220-18 H

1,8 mm thick PE-based sheet waterproofing membrane for water tanks

### DESCRIPTION

Sikaplan® WT 4220-18 H is a flexible, 1,8 mm thick, homogeneous sheet waterproofing membrane based on flexible polyethylene (FPO-PE).

### USES

Sikaplan® WT 4220-18 H may only be used by experienced professionals.

The Product is designed for:

- Lining of enclosed potable water tanks

Please note:

- Do not use the Product in areas where it is exposed to weathering or UV-light
- The Product is not suitable for permanent exposure to liquids with temperatures above +40 °C
- The Product is not resistant to frequent or permanent exposure to water with a content of free chlorine exceeding 0,8 mg/l

### CHARACTERISTICS / ADVANTAGES

- Certified for contact with water for human consumption
- Easy to clean and low maintenance
- Proven performance over decades
- Contains no fungicides, heavy metals, halogens or plasticisers
- High tensile strength and elongation
- Resistant to microbial degradation
- Hot air weldable
- Flexible in cold temperatures
- Suitable for contact with acidic (soft) water
- Can be installed on damp and wet substrates

### APPROVALS / STANDARDS

- CE Marking and Declaration of Performance to EN 13361:2004/A1:2006 — Geosynthetic barriers — Characteristics required for use in the construction of reservoirs and dams
- CE Marking and Declaration of Performance to EN 13967 - Flexible sheets for waterproofing - Damp proofing and basement tanking
- Water Regulations Material Approval BS 6920-1 (WRAS UK)

### PRODUCT INFORMATION

|                            |   |                    |
|----------------------------|---|--------------------|
| <b>Chemical Base</b>       | FPO/PE  |                    |
| <b>Packaging</b>           | <b>Roll width</b>   | <b>Roll length</b> |
|                            | 0,54 m  | 5 m                |
|                            | 1,08 m  | Specified          |
| <b>Appearance / Colour</b> | <b>Surface texture</b>  | Smooth             |
|                            | <b>Colour</b>   | Blue               |
| <b>Shelf Life</b>          | 5 years from date of production   |                    |
| <b>Storage Conditions</b>  | 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 sunlight and weathering. 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.

|                            |   |             |
|----------------------------|---|-------------|
| <b>Effective Thickness</b> | 1,73 mm ± 0,08 mm                               | (EN 1849-2) |
| <b>Mass per Unit Area</b>  | 1,60 kg/m <sup>2</sup> ± 0,08 kg/m <sup>2</sup> | (EN 1849-2) |

## TECHNICAL INFORMATION

|  |                                      |  |                |
|--|--------------------------------------|--|----------------|
| <b>Tensile Strength</b>                | Longitudinal (MD)                    | 27 N/mm <sup>2</sup> ± 3 N/mm <sup>2</sup> | (EN ISO 527-3) |
|  | Transversal (CMD)                    | 26 N/mm <sup>2</sup> ± 3 N/mm <sup>2</sup> |                |
|  | Longitudinal (MD)                    | 27 N/mm <sup>2</sup> ± 3 N/mm <sup>2</sup> | (EN 12311-2)   |
|  | Transversal (CMD)                    | 26 N/mm <sup>2</sup> ± 3 N/mm <sup>2</sup> |                |
| <b>Elongation</b>                      | Longitudinal (MD)                    | > 700 %                                    | (EN ISO 527-3) |
|  | Transversal (CMD)                    | > 700 %                                    |                |
| <b>Resistance to Static Puncture</b>   | 3,3 kN ± 0,3 kN                      | (EN ISO 12236)                             |                |
| <b>Resistance to Impact</b>            | Method A, 500 g falling weight       | Watertight at 800 mm drop height           | (EN 12691)     |
| <b>Resistance to Static Load</b>       | No perforation at 20 kg for 24 h     | (EN 12730)                                 |                |
| <b>Foldability at Low Temperature</b>  | No cracks at -40 °C                  | (EN 495-5)                                 |                |
| <b>Resistance to tear (nail shank)</b> | Longitudinal (MD)                    | 960 N ± 96 N                               | (EN 12310-1)   |
|  | Transversal (CMD)                    | 920 N ± 92 N                               |                |
| <b>Joint Shear Resistance</b>          | > 400 N/50mm                         | (EN 12317-2)                               |                |
| <b>Dimensional Change after Heat</b>   | Longitudinal (MD), 6 hours at +80 °C | < 2 %                                      | (EN 1107-2)    |
|  | Transversal (CMD), 6 hours at +80 °C | < 2 %                                      |                |
| <b>Reaction to Fire</b>                | Class E                              | (EN 13501-1)                               |                |

## SYSTEM INFORMATION

### System Structure

#### Ancillary Products:

- Sikaplan® WT 4220-15 C
- Sikaplan® WT 4220-15 C Felt
- Sikaplan® WT External/Internal Corner preformed 90° PE
- Sikaplan® W Flat Profile Stainless Steel
- Sikaplan® WT Fixation Plate PE
- Sarnafil® T Prep
- Sarnafil® T Clean

## APPLICATION INFORMATION

|                                |         |        |
|--------------------------------|---------|--------|
| <b>Ambient Air Temperature</b> | Minimum | +5 °C  |
|                                | Maximum | +35 °C |
| <b>Substrate Temperature</b>   | Minimum | 0 °C   |
|                                | Maximum | +35 °C |

## 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.

## 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

### 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

The substrate must be sound, clean, homogeneous, free from all contaminants such as oils and grease, dust and loose or friable particles, cement laitance and other poorly adhering materials.

For information on substrate disinfection before application, refer to the following:

- Sika® Method Statement: Sikaplan® WT 4220 sheet membrane (PE) system for lining potable water reservoirs

## APPLICATION METHOD / TOOLS

### 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.

For information on application, refer to the following:

- Sika® Method Statement: Sikaplan® WT 4220 sheet membrane (PE) system for lining potable water reservoirs

## 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

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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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### **PRODUCT DATA SHEET**

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