

## PRODUCT DATA SHEET

# SikaShield® E50 HDPE SA IN 1,5 mm

Self-adhesive modified bituminous membrane for post-applied below ground waterproofing

### DESCRIPTION

SikaShield® E50 HDPE SA IN 1,5 mm is a bituminous, self-adhesive, fully bonded, post-applied, waterproofing sheet membrane with a thickness of 1.5 mm. It consists of a cross-laminated HDPE film that is pre-coated with an SBS modified bitumen compound. The underside has a removable liner over the adhesive compound for easy application. SikaShield® E50 HDPE SA IN 1,5 mm membranes must be protected with screed, reflective coating, drainage boards, or protection boards to protect from UV or damages from backfilling.

### USES

The Product is used as a waterproofing membrane for:

- Basements and other below ground structures
- Horizontal reinforced concrete slabs, decks, podiums and protrusions
- Vertical reinforced concrete walls

- Single and strip foundations
- Extensions and reconstruction works

### CHARACTERISTICS / ADVANTAGES

- Used in versatile applications from basement to roof
- Cold-applied and self-adhesive (no heating or open flames required)
- Easy and fast application
- Fully bonded
- No special equipment required for application
- Good resistance to all natural aggressive substances in groundwater and soil
- Good electrical resistance
- Good resistance to ageing, tearing and perforation
- Excellent adhesive property and
- Dimensionally stable
- Good flexibility even at low temperatures

### PRODUCT INFORMATION

<b>Product declaration</b>	Bonded sheet membrane according to IS 16471 : 2017		
<b>Chemical base</b>	Compound	SBS modified bitumen	
	Top layer	Cross laminated HDPE film	
	Bottom layer	Release liner PE film	
<b>Packaging</b>	Roll width	1.0 m ± 0.01 m	(EN 1848-1)
	Roll length	20.0 m ± 0.2 m	
<b>Shelf life</b>	12 months from date of production		
<b>Storage conditions</b>	The product must be stored in original unopened and undamaged packaging in dry conditions and temperatures between +5 °C and +30 °C. Store in a horizontal position in pallets with maximum height 1 meter. Do not stack pallets of the rolls on top of each other, or under pallets of any other materials during transport or storage. Protect from long exposure to direct sunlight.		

<b>Appearance / Colour</b>	Top surface	HDPE (High Density Polyethylene)
	Bottom surface	Release film
	Top layer colour	Black

NOTE: Small wrinkles on the membrane surface appear due to manufacturing process, it doesn't affect the integrity of the waterproofing system.

<b>Thickness</b>	1.50 mm ± 0.08 mm	(ASTM D5147)
<b>Mass per unit area</b>	1.70 kg/m <sup>2</sup> ± 0.09 kg/m <sup>2</sup>	(ASTM D5147)

## TECHNICAL INFORMATION

<b>Resistance to static puncture</b>	> 200 N	(ASTM E154)
<b>Tensile strength</b>	> 3.5 N/mm <sup>2</sup>	(ASTM D412)
<b>Elongation at break</b>	> 180 %	(ASTM D412)
<b>Adhesion in peel</b>	> 1.5 N/mm (adhesion to primed substrate)	(ASTM D903)
<b>Resistance to tear (nail shank)</b>	> 125 N/mm	(ASTM D4073)
<b>Joint peel resistance</b>	> 1.8 N/mm (adhesion to itself)	(ASTM D1876)
<b>Service temperature</b>	-15 °C to +50 °C	
<b>Flexibility at low temperature</b>	No cracks at -15 °C	(ASTM D1970)
<b>Softening point</b>	> 105 °C	(ASTM D36)
<b>Water tightness</b>	No leakage at 6 bar hydrostatic pressure	(ASTM D5385)

## APPLICATION INFORMATION

<b>Dew point</b>	The substrate temperature must be at least +3 °C above the dew point to reduce the risk of condensation and so limited adhesion.
<b>Ambient air temperature</b>	+5 °C min. / +50 °C max
<b>Relative air humidity</b>	< 80 %
<b>Substrate temperature</b>	+5 °C min. / +50 °C max

## 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.

## FURTHER DOCUMENTS

- Method Statement - Self-Adhesive Membranes for Below Ground

## ECOLOGY, 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 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

#### SUITABLE SUBSTRATES

- Concrete
- Wood
- Metal
- Bituminous membranes with a smooth surface
- Tiles
- Brick masonry
- Cementitious screeds
- Plasterboards
- Plasters
- Foamed concrete blocks, if properly primed (Contact Sika Technical Services for more information)

## SYSTEM DESIGN

When designing the waterproofing system, make sure that the supporting structure has sufficient structural strength to support all new and existing layers of the system build-up.

## SUBSTRATE CONDITION

The substrate surface must be uniform, firm, smooth and free of any sharp protrusion or burrs, clean, dry, free of grease, laitance, oil, dust and loosely adhering particles.

## SUBSTRATE PREPARATION

### REPAIR

Unevenness and surface defects (such as blowholes, voids, honeycombing, cracks, protrusions, etc.) in the surface must be pre-treated and filled with suitable Sikadur® or SikaTop® or Sika MonoTop® range of repair materials prior to the application, in order to prevent any subsequent damage to the membrane sheets.

### PRIMING

#### Primer selection

A suitable primer has to be used for an optimal bond between SikaShield® E50 HDPE SA IN 1,5 mm membrane sheet and the concrete substrate, for example:

- SikaShield® Primer S-30 IN
  - SikaShield® Primer W-30 IN
1. Apply the appropriate Sika® primer with the required consumption onto the prepared dry surface.  
Note: Refer to the individual Product Data Sheet of the primer.
  2. Allow the primer to dry before membrane installation.

For more detailed information please refer to the Method Statement for the SikaShield® E50 HDPE SA IN 1,5 mm membrane system.

## APPLICATION

### IMPORTANT

#### Unrolling at low temperatures

At low temperatures, the membrane becomes less flexible.

1. Be careful when unrolling to avoid damaging the membrane.

### IMPORTANT

#### Damage through footwear

Footwear with spikes or sharp protrusions may puncture the membrane.

1. Use footwear with a flat profile when walking over the membrane.

### IMPORTANT

#### Application at less than +5 °C

When applying the membranes at temperatures lower than +5 °C, use heating equipment to ensure that the substrate temperature is within the given temperature range.

### IMPORTANT

#### Application in humid/wet conditions

When applying the membranes in wet or humid conditions, use heating equipment to ensure that the substrate is dry before application.

#### Seasonal symbol

Note: If a seasonal symbol is printed on the roll's label, it is advisable to use the membrane during the indicated season.

#### Tackiness at high temperatures

Note: When laying the membrane at high temperatures, the integral adhesive will become 'tacky' and may restrict laying operations.

### ALIGNMENT

### IMPORTANT

#### Avoid coinciding joints

To avoid coinciding joints, lay the membranes parallel to one another. When applying on another bituminous membrane, make sure to stagger the overlaps of the previous layer.

1. Unroll the membrane.
2. Align the membrane.
3. Re-roll the membrane before application.

### MEMBRANE OVERLAPS

1. Overlap the membranes by a minimum of 100 mm on the sides and 150 mm on each end or as specified by the user.
2. At the end overlap, cut off a corner measuring 50 mm per side at an angle of 45°.

Note: The membrane comes with a pre-designed 100 mm selvedge for overlapping at longitudinal joints. Pre-mark 150 mm (no selvedge provided) in the transverse direction of the membrane already fixed.

### SELF-ADHESIVE BONDING

### IMPORTANT

Do not create counter-gradient overlaps.

1. At one end of the sheet, peel away part of the release liner from the underside and bond this end to the substrate.
2. Continue to peel away the release liner sideways from the rest of the sheet membrane and bond it to the substrate.
3. Roll the entire surface area of the applied membrane with a heavy roller to ensure any air bubbles are removed.

## DETAILING

1. Use a sharp knife to cut in all details such as internal and external corners, upstands, vent pipes, drains, support metalwork etc.

Refer to the relevant method statement for further information on detailing.

## PROTECTION

1. The membrane must be protected from damage during any ongoing site activities or for exposure to environment soon after installation. Suitable protection materials are protection sheet, geotextile, drainage boards, protective screed, etc.

## LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

## 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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**Product Data Sheet**  
SikaShield® E50 HDPE SA IN 1,5 mm  
October 2022, Version 01.01  
02072520100000080

SikaShieldE50HDPESAIN15mm-en-IN-(10-2022)-1-1.pdf