

## PRODUCT DATA SHEET

# SikaShield® E54 PE 3 mm

Elastomeric bituminous membrane surfaced with PE foil and flexible at -15 °C

### DESCRIPTION

SikaShield® E54 PE 3 mm is an SBS modified bituminous waterproofing membrane with a thickness of 3 mm. It is reinforced with a non-woven polyester fabric dimensionally stabilised with glass fibre and is flexible at -15 °C. The top surface is coated with a polyethylene foil, which ensures the bond of the overlying layer. The underside of the product has a burn-off film for easy torch-application.

### USES

SikaShield® E54 PE 3 mm is used as a waterproofing membrane for:

- Flat and sloped roofs
- Inverted roofs
- New construction and refurbishment projects
- Single slab or prefabricated
- Stressed skin structures

SikaShield® E54 PE 3 mm is used as a:

- Base sheet in multi-layer systems

Please note:

- The Product is not suitable for roofs permanently exposed to UV radiation.

### FEATURES

- Easy to install by torching method
- Fully bonded
- High durability
- Good mechanical properties (tensile, tear, shear)

### CERTIFICATES AND TEST REPORTS

- CE marking and declaration of performance based on EN 13707:2004+A2:2009 Flexible sheets for waterproofing — Reinforced bitumen sheets for roof waterproofing — Definitions and characteristics
- Fire test report EN 13501-5, Warringtonfire, No. 21292K

### PRODUCT INFORMATION

<b>Composition</b>	Composition	SBS modified bitumen	
	Reinforcing material	non-woven spunbond polyester fabric	
<b>Packaging</b>	Roll width	1.0 m	(EN 1848-1)
	Roll length	8.0 m	
	Refer to the current price list for available packaging variations.		
<b>Appearance and colour</b>	Top surface	Polyethylene foil	
	Bottom Surface	Polyethylene foil	
<b>Shelf life</b>	24 months from date of production		

## Storage conditions

The Product must be stored in original unopened and undamaged packaging in dry conditions and temperatures between +5 °C and +35 °C. Protect the Product from direct weather exposure and sunlight. Store in a vertical position. Pallets may be stacked on top of the rolls if all following conditions are met:

- The rolls have a wooden board on top, separating them from the pallet above.
- The weight of the pallet above is equal to or less than the weight of the rolls.

Always refer to the packaging.

## TECHNICAL INFORMATION

<b>Resistance to tear</b>	Longitudinal (MD)	140 N ± 42 N	(EN 12310-1)
	Transversal (CMD)	140 N ± 42 N	
<b>Joint shear resistance</b>	Longitudinal (MD)	350 N/50 mm ± 70 N/50 mm	(EN 12317-1)
	Transversal (CMD)	250 N/50 mm ± 50 N/50 mm	
<b>Reaction to fire</b>	Class E		(EN 13501-1)
<b>Watertightness</b>	Method B, 24 hours at 60 kPa	Pass	(EN 1928)
<b>Flexibility at low temperature</b>	≤ -15 °C		(EN 1109)
<b>Maximum tensile force</b>	Longitudinal (MD)	400 N/50 mm ± 80 N/50 mm	(EN 12311-1)
	Transversal (CMD)	300 N/50 mm ± 60 N/50 mm	
<b>Elongation at maximum tensile force</b>	Longitudinal (MD)	(35 ± 15) %	(EN 12311-1)
	Transversal (CMD)	(40 ± 15) %	

## APPLICATION INFORMATION

<b>Ambient air temperature</b>	Maximum	+30 °C
	Minimum	+5 °C
<b>Relative air humidity</b>	Maximum	80 %
<b>Substrate temperature</b>	Maximum	+30 °C
	Minimum	+5 °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.

## FURTHER DOCUMENTATION

### Application of torch-applied membranes

Note: Always make reference to local regulations, standards, guidelines and established practice when using torch-applied membranes.

- Method Statement - Roofing build-up with bituminous membranes

## 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

#### SYSTEM DESIGN

Consider the following when designing the system:

- The supporting structure must be of sufficient structural strength to support all new and existing layers of the system build-up.
- If used as a roof system, the complete system must be designed to withstand and be secured against wind uplift loadings.

#### 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

#### PRIMING

##### Primer selection

Note: For information on the appropriate primer, contact Sika Technical Service.

1. Apply the appropriate Sika® primer with the required consumption to the prepared dry surface. Note Refer to the Product Data Sheet of the primer.
2. Allow the primer to dry before installing the membrane.

### 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

##### Damage through overheating

The polyester melts at +260 °C. If it is damaged through overheating, the membrane becomes unusable.

1. Keep moving the flame while torching to avoid overheating the membrane.

#### IMPORTANT

##### Reduced adhesion through insufficient heating

If the membrane is not sufficiently heated, the adhesion to the substrate, between layers or on the overlaps will be reduced.

1. Make sure to heat the membrane sufficiently.
2. If the membrane does not adhere to other elements, lift and retorch the unbonded areas.

#### 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 on sloped surfaces

For slopes with an inclination greater than 15 %, multi-layered roofs must be carefully designed and, if necessary, integrated with mechanical fastenings.

##### 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 straddle 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 supplier.
2. At the end overlap, cut off a corner measuring 100 mm per side at an angle of 45°.

#### TORCHING

1. Heat the substrate and the backing film on the underside of the membrane with a gas burner.
2. When the backing film starts to melt, the membrane is ready to stick.
3. Roll the heated membrane forward and press it firmly against the substrate to bond it.
4. Make sure a bead of melted bitumen is visible along the full length of the overlap sides and ends when laying.

## Suitable substrates for torching

- Concrete
- Perlite screed
- Bituminous membranes with a smooth surface
- Coatings (check the compatibility)
- Brick masonry
- Cementitious screeds

## DETAILING

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

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

## MAINTENANCE INSTRUCTIONS

Inspect the auxiliary works, flashings, drainage outlets, and overflow pipes to verify their functionality.

Remove any leaves, moss, or other vegetation to prevent ponding on the roof that could overload the drainage system.

To ensure the longevity of the waterproofing membrane, schedule regular inspections of the membrane and detailing.

## LOCAL RESTRICTIONS

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

## LEGAL NOTES

Any information or suggestions for use concerning Sika's products, which we either in writing or orally have given buyers or end-users of the product, have been given in good faith based on our own experiences and based on approved praxis and the technological and scientific knowledge on the time of giving such suggestions and information, which are given without any type of guarantees, and which do not lead to any further responsibility from Sika Danmark A/S, besides what is stated in the sales agreement in question. The buyer or end-user should themselves investigate or otherwise make sure, that our products are suitable for the use in question and further make sure that the products are kept and used correct and in agreement with the published rules and considering the actual conditions in order to avoid damages or less satisfactory results. Any order is accepted and any deliverance is affected according to the general terms of sales and delivery from Sika Danmark A/S, which are considered known and accepted, and which could be handed out when asked for. Our catalogues are not up-dated automatically. The present product data sheet is only for use in Denmark. Values stated in the present product data sheet should be seen as recommended, unless stated otherwise.

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