

PRODUCT DATA SHEET

SikaShield® P44 PE RT 4 mm

Anti-root plastomeric bituminous membrane surfaced with PE foil and flexible at -10 °C

DESCRIPTION

SikaShield® P44 PE RT 4 mm is an APP modified bituminous waterproofing membrane with a thickness of 4 mm. It contains an anti-root additive, which allows the membrane to be in direct contact with the soil. It is reinforced with a non-woven polyester fabric dimensionally stabilised with glass fibre and is flexible at -10 °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

The Product is used as a waterproofing membrane for:

- Balconies and terraces under a heavy protection layer such as tiles or gravel.
- Flat and sloping roofs under protective layers or ballast
- Roof gardens
- Roof garden with final waterproofing layer in contact with soil
- Basements and other below ground structures
- Horizontal reinforced concrete slabs, decks, podiums and protrusions
- Vertical reinforced concrete walls

The Product 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

- Good resistance to root penetration
- Good resistance to humic acids and fertilizers
- Resistant to aggressive mediums in natural ground water and soil
- Can be applied in direct contact with soil
- Good durability
- Fully bonded

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
- CE marking and declaration of performance based on EN 13969:2004/A1:2006 Flexible sheets for waterproofing — Bitumen damp proof sheets including bitumen basement tanking sheets — Definitions and characteristics
- Resistance to root damage FLL, Hochschule Geisenheim University

PRODUCT INFORMATION

Composition	Composition	APP modified bitumen with anti-root additive
	Reinforcing material	non-woven polyester fabric dimensionally stabilised with glass fibre
Packaging	Roll width	1.0 m (EN 1848-1)
	Roll length	10.0 m
	Refer to current price list for packaging variations.	
Shelf life	36 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. Store in a vertical 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.

Appearance and colour	Top surface	Polyethylene film
	Bottom surface	Polyethylene film

Effective thickness	Effective thickness	4.0 mm ± 0.2 mm	(EN 1849-1)
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TECHNICAL INFORMATION

Maximum tensile force	Longitudinal (MD)	400 N/50 mm ± 80 N/50 mm	(EN 12311-1)
	Transversal (CMD)	300 N/50 mm ± 60 N/50 mm	

Elongation at maximum tensile force	Longitudinal (MD)	35 % ± 15 %	(EN 12311-1)
	Transversal (CMD)	40 % ± 15 %	

Resistance to tear	Longitudinal (MD)	140 N ± 42 N	(EN 12310-1)
	Transversal (CMD)	140 N ± 42 N	

Joint shear resistance	Longitudinal	350 N/50 mm ± 70 N/50 mm	(EN 12317-1)
	Transversal	250 N/50 mm ± 50 N/50 mm	

Flexibility at low temperature	≤ -10 °C	(EN 1109)
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Watertightness	Method B: 24 hours at 60 kPa	Pass	(EN 1928)
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Reaction to fire	Class E	(EN 13501-1)
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APPLICATION INFORMATION

Ambient air temperature	Minimum	+5 °C
	Maximum	+40 °C

Relative air humidity	Maximum	80 %
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Substrate temperature	Minimum	+5 °C
	Maximum	+40 °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 INFORMATION

- Guidelines and good practice for torch-applied membranes
- Method Statement - Roofing Build-up with Bituminous Membranes
- Method Statement - Bituminous 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 the 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 roof system:

- The supporting structure must be of sufficient structural strength to support all new and existing layers of the roof build-up.
- The complete roof system must be designed to withstand and be secured against wind uplift loadings.
- The wind uplift resistance of the adhered roofing assembly is limited by the adhesion strength of the Product to the substrate.

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 selecting the appropriate primer, contact Sika technical service.

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. Primer recommended Sika® Igoflex® P10 GR. Consumption approx. 300 gr/m².

2. Allow the primer to dry before membrane installation.

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 reinforcement 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

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

1. If the membrane does not adhere to other elements, lift and retorch the unbonded areas.

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.
2. At the end overlap, cut off a corner measuring 100 mm per side at an angle of 45°.
3. Weld the overlaps with great care until you see a trickle of melted mixture about 10 mm wide coming out along the line of the overlap.

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, support metalwork etc.

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

MAINTENANCE

Check the functionality of the auxiliary works, flashings, drainage outlets, overflow pipes etc.

Remove any leaves, moss and other vegetation, which could cause ponding on the roof and overload the drainage system.

To maintain the function of the roof waterproofing membrane during its lifespan, it is advisable to arrange periodically for inspection of the membrane and detailing.

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.

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Product Data Sheet
SikaShield® P44 PE RT 4 mm
November 2023, Version 02.01
020920011990001617

SikaShieldP44PERT4mm-en-GR-(11-2023)-2-1.pdf