BUILDING TRUST

PRODUCT DATA SHEET

SikaShield® E46 MG EG 4 mm

Elastomeric bituminous membrane surfaced with mineral granules and flexible at -10 °C

DESCRIPTION

SikaShield® E46 MG EG 4 mm is an SBS modified bituminous waterproofing roofing membrane with a nominal thickness of 4 mm.
It is reinforced with non-woven polyester fabric and remains flexible at temperatures as low as –10 °C.
The upper surface is finished with mineral granules, allowing for permanent exposure to UV radiation.
The underside is provided with a burn-off film, designed for full torch-on application.

USES

The product is used as a waterproofing membrane for:
- Balconies and terraces
- Flat roofs and sloped roofs with gradients of up to 15 %

System Configuration
The product may be used as:
- An exposed single-layer waterproofing membrane, or
- A top (capping) layer in a multi-layer bituminous roofing system

FEATURES

- Decorative mineral granules for UV resistance
- Torch applied installation
- Excellent flexibility at low temperatures
- Fully bonded waterproofing system
- Very good mechanical performance (tensile, tear and shear resistance)
- Suitable for use under protective layers, screeds, or tiled finishes in approved systems

PRODUCT INFORMATION

Composition	Composition Reinforcing material	SBS modified bitumen non-woven polyester fabric	
Packaging	Roll length Roll width	1.0 m ±1% 10.0 m ±1%	(EN 1848-1)
Shelf life	24 months from date of production		
Storage conditions	The product must be stored in its original, unopened, and undamaged packaging, under dry conditions and at temperatures between +5 °C and +35 °C. Rolls shall be stored in a vertical position. Do not stack pallets of rolls on top of each other, and do not place them under pallets of other materials during transport or storage. Always follow the storage instructions provided on the product packaging.		

Effective thickness	4.0 mm ± 0.2 mm		(EN 1849-1)
Resistance to static loading	20 Kg		(EN 12730:2001)
Resistance to static puncture	1750 mm		(EN 12691)
Tear strength	Longitudinal (MD) Transversal (CMD)	500 N ± 25% 400 N ± 25%	(ASTM D5147)
Joint shear resistance	Longitudinal Transversal	600 N/50 mm ± 25% 450 N/50 mm ± 25%	(EN 12317-1)
Reaction to fire	Class E		(EN 13501-1)
Watertightness	Method B: 24 hours at 60 Pass kPa		(EN 1928)
Flow resistance	≥100 °C		(EN 1110)
Flexibility at low temperature	-10 °C		(EN 1109)
Maximum tensile force	Longitudinal (MD) Transversal (CMD)	750 N/50 mm ± 25% 500 N/50 mm ± 25%	(EN 12311-1)
Elongation at maximum tensile force	Longitudinal (MD) Transversal (CMD)	45 % ± 20% 50 % ± 20%	(EN 12311-1)
Ambient air temperature	Minimum Maximum	+5 °C +40 °C	
Substrate temperature	Minimum Maximum	+5 °C +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.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

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.

APPLICATION

IMPORTANT INSTALLATION GUIDELINES

- Unrolling at Low Temperatures

At low temperatures, the membrane becomes less flexible.
Care must be taken during unrolling to avoid damaging the membrane.

- Damage Caused by Footwear

Footwear with spikes or sharp protrusions may puncture the membrane.
Only footwear with a flat sole profile should be used when walking on the membrane.

- Damage Due to Overheating

The polyester reinforcement melts at +260 °C.
If overheating occurs, the membrane becomes unusable.
Keep the flame continuously moving while torching to prevent overheating.

- Reduced adhesion due to insufficient heating

Ensure the membrane is sufficiently heated.
Insufficient heating will reduce adhesion to the substrate, between layers, or at overlaps.
If the membrane does not adequately adhere, lift and re□torch the unbonded areas.

- Seasonal Use

If a seasonal symbol is printed on the roll label, the membrane should be used only during the indicated season.

- Tackiness at High Temperatures

When installing at high ambient temperatures, excessive softening of the bitumen may occur, which can lead to slippage or difficulty in maintaining alignment during installation.

ALIGNMENT

- Avoid Coinciding Joints

Lay membranes parallel to one another to avoid coinciding joints.
When installing over another bituminous membrane, ensure overlaps straddle the joints of the previous layer.
Procedure:

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

MEMBRANE OVERLAPS:

Side overlaps: minimum 100 mm
End overlaps: minimum 150 mm
At end overlaps, cut off one corner measuring 100 mm per side at a 45° angle.
Weld overlaps carefully until a 10 mm wide bead of molten compound flows along the overlap edge.

SUITABLE SUBSTRATES FOR FASTENING

- Concrete
- Wood

- Metal
- Perlite screed
- Bituminous membranes
- Coatings (compatibility must be checked)

TORCHING PROCEDURE

Heat both the substrate and the backing film on the underside of the membrane using a gas burner.
Once the backing film begins to melt, the membrane is ready for bonding.
Roll the heated membrane forward and press firmly to ensure adhesion.
A continuous bead of molten bitumen must be visible along the full length of all overlaps.

SUITABLE SUBSTRATES FOR TORCHING

- Concrete
- Perlite screed
- Smooth-surfaced bituminous membranes
- Coatings (check compatibility)
- Brick masonry
- Cementitious screeds

DETAILING

Use a sharp knife to cut and shape all details, including:

- Internal and external corners
- Upstands
- Vent pipes
- Drains
- Supporting metalwork

Refer to the relevant method statement for detailed installation guidance.

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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