BUILDING TRUST

PRODUCT DATA SHEET

Sika® Icosit® Dielectric Membrane 4 mm

4.0 mm thick plastomeric bituminous membrane with high dielectric strength and high volume resistivity

DESCRIPTION

Sika® Icosit® Dielectric Membrane 4 mm is a polymer-modified bituminous waterproofing membrane with special properties for preventing stray currents from electric railway and tram lines. It is reinforced with a non-woven spunbond polyester fabric and is flexible at -10 °C. The top surface is coated with a patented talc treatment that ensures the bonding of the overlying layer and fast welding of the joints. The underside of the product has a burn-off film for easy torch-application.

USES

Sika® Icosit® Dielectric Membrane 4 mm may only be used by experienced professionals.

Sika® Icosit® Dielectric Membrane 4 mm is used as a waterproofing insulating membrane for:
- Railway and tram track beds

Sika® Icosit® Dielectric Membrane 4 mm is used for:
- Avoiding electrical dispersion from railway and tram lines.
- Protecting the metal from corrosion related to the cathode-anode formation due to stray currents.

Please note:
- The Product may only be used by experienced professionals.

FEATURES

- Good dielectric insulation, avoiding electrical dispersion and stray currents
- Easy to install by torching method
- Easy bonding and joint sealing
- Good durability
- Good mechanical properties (tensile, tear, shear)

CERTIFICATES AND TEST REPORTS

- Determination of volume resistance EN 62631-3-1, Sika® Icosit® Dielectric Membrane 4 mm, University of Padova, Test report No. 012_C / 2023 / HV
- Railway applications EN 50122-2 & EN 62631-3-1, Sika® Icosit® Dielectric Membrane 4 mm, University of Padova, Test report No. 062_A / 2024 / HV

PRODUCT INFORMATION

Composition	Composition	Polymer-modified bitumen
	Reinforcing material	Non-woven spunbond polyester fabric
Packaging	Roll width	1.0 m
	Roll length	10.0 m
	Refer to the current price list for available 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. 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.

Effective thickness	4.0 mm ± 0.2 mm		(EN 1849-1)
Appearance	Top surface	Talc	
	Bottom surface	Polyethylene foil	

TECHNICAL INFORMATION

Resistance to impact	1250 mm		(EN 12691)
Resistance to static loading	20 kg		
Tensile strain at break	Longitudinal (MD)	50 % ± 15 %	(EN 12311-1)
	Transversal (CMD)	50 % ± 15 %	
Resistance to tear	Longitudinal (MD)	150 N ± 45 N	(EN 12310-1)
	Transversal (CMD)	150 N ± 45 N	
Joint shear resistance	Longitudinal (MD)	800 N/50 mm ± 160 N/50 mm	(EN 12317-1)
	Transversal (CMD)	600 N/50 mm ± 120 N/50 mm	
External fire performance	F roof		(EN 13501-5)
Reaction to fire	Class E		(EN 13501-1)
Watertightness	Method B: 24 hours at 60 kPa	Pass	(EN 1928)

Electrical resistivity (EN 50122-2)

Current	AC (Alternating Current)	DC (Direct Current)	Standard
The median of volume resistivity	1.62 TΩ·m (1.62×10^{12} Ω·m)	1.33 TΩ·m (1.33×10^{12} Ω·m)	EN 62631-3-1:2023
The median of the electric strength	17.3 kV/mm	-	EN 60243-1:2013

Flexibility at low temperature	≤ -10 °C		(EN 1109)
Maximum tensile force	Longitudinal (MD)	900 N/50 mm ± 180 N/50 mm	(EN 12311-1)
	Transversal (CMD)	700 N/50 mm ± 140 N/50 mm	

APPLICATION INFORMATION

Ambient air temperature	Maximum	+30 °C
	Minimum	+5 °C
Relative air humidity	Maximum	80 %

Substrate temperature	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.

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 PREPARATION

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.
IMPORTANT
Ventilation in enclosed spaces
When welding or torching in enclosed spaces, fresh air ventilation must be provided.
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.
Prime only the sloping and vertical part of the surface.
Use the following products as a primer: Sikadur®-188 with quarz sand spread on the fresh material to increase adhesion strength or Sika® Igolflex® P-10.
If the concrete basement cannot be smoothed, apply a protection layer. The protection layer consists of a thick geotextile.

Use the equipment presented in Sika® Icosit® Dielectric Membrane 4 mm Method Statement to achieve the required substrate quality.
Keep the membrane protected from damage during any ongoing activities on site.

APPLICATION

IMPORTANT
Damage due to excessive heat
Overheating can result in the membrane melting, thus its damage.
1. Do not overheat the membrane.

Torch application
1. Unroll the Product and cut it according to the required size.
2. Place the Product on the area to be protected or waterproofed. On the horizontal part of the slab, lay the Product loosely.
3. IMPORTANT In the sloped and vertical areas, the membrane has to be fully bonded to the substrate. Heat up the Product with a flame.
4. Place the next roll in place with an adequate overlap of the previous layer, about 10 cm.
5. Weld the horizontal area only on the overlaps.

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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