

PRODUCT DATA SHEET

Sikatherm® Foam 50 MP

2-component polyurethane insulation foam with closed cells for hot spray application



DESCRIPTION

Sikatherm® Foam 50 MP is 2-component polyurethane, closed cell, rigid foam for spray application, with high insulation properties suitable for thermal insulation of roofs.

USES

- Insulation of floors, roofs, walls and ceilings
- Insulation of pipes, systems, etc.
- Uniform & continuous layer on irregular substrates before overcoating with waterproofing systems
- Suitable for occasional foot traffic

FEATURES

- Very rapid curing time
- High-insulation properties
- Waterproof
- Permeable to water vapour
- Continuous layer (joints free) formation

CERTIFICATES AND TEST REPORTS

CE Marking and Declaration of Performance to EN 14315-1: 2013 - In-situ formed sprayed rigid polyurethane (PUR) and polyisocyanurate (PIR) foam products - Part 1: Specification for the rigid foam spray before installation

PRODUCT INFORMATION

| | | |
|------------------------------|--|----------------------------------|
| Composition | Two-component polyurethane | |
| Packaging | Component A (Isocyanate) : | 250 kg drum |
| | Component B (Resin) : | 230 kg drum |
| Appearance and colour | Component A (Isocyanate) : | Brown liquid |
| | Component B (Resin) : | Yellowish liquid |
| Shelf life | Component A (Isocyanate): | 6 months from date of production |
| | Component B (Resin): | 5 months from date of production |
| Storage conditions | <p>The Product must be stored in original, unopened and undamaged packaging in dry conditions at temperatures between +10 °C and +25 °C. Protect from frost and from direct exposure to sunlight.</p> <p>Higher storage temperatures may reduce the shelf life of the product. Component A is highly hygroscopic. Avoid exposing component A to atmospheric humidity. Absorbed moisture can affect the reaction behaviour.</p> | |

| | | |
|-------------------------------------|--------------------------|----------------------------|
| Density | Component A (Isocyanate) | ~1.23 kg/lit (at 25 °C) |
| | Component B (Resin) | ~1.16 kg/lit (at 20 °C) |
| | Core density | 48 to 55 kg/m ³ |
| Closed cell content: 93% (ISO 4590) | | |
| Viscosity | Component A (Isocyanate) | ~200 mPas*s (at 25 °C) |
| | Component B (Resin) | ~450 mPas*s (at 20 °C) |

TECHNICAL INFORMATION

| | | |
|----------------------|---------|-------------|
| Compressive strength | 250 kPa | EN 826 |
| Reaction to fire | Class E | EN 13501-01 |

| Thermal conductivity | Type of facing: Diffusion open | | |
|----------------------|--------------------------------|--|---|
| | Thickness (mm) | Declared aged thermal conductivity, λ (W/mK) | Declared Thermal Resistance, R_D (m ² K/W) |
| | 5 | 0.028 | 0.18 |
| | 10 | 0.028 | 0.36 |
| | 15 | 0.028 | 0.53 |
| | 20 | 0.028 | 0.71 |
| | 25 | 0.028 | 0.89 |
| | 30 | 0.028 | 1.07 |
| | 35 | 0.028 | 1.25 |
| | 40 | 0.028 | 1.42 |
| | 45 | 0.028 | 1.60 |
| | 50 | 0.028 | 1.78 |
| | 55 | 0.028 | 1.96 |
| | 60 | 0.028 | 2.13 |
| | 65 | 0.028 | 2.31 |
| | 70 | 0.028 | 2.49 |
| | 75 | 0.028 | 2.67 |
| | 80 | 0.028 | 2.86 |
| | 85 | 0.027 | 3.15 |
| | 90 | 0.027 | 3.33 |
| | 95 | 0.027 | 3.52 |
| | 100 | 0.027 | 3.70 |
| | 105 | 0.027 | 3.89 |
| | 110 | 0.027 | 4.07 |
| | 115 | 0.027 | 4.26 |
| | 120 | 0.027 | 4.44 |
| | 125 | 0.027 | 4.63 |
| | 130 | 0.027 | 4.81 |
| | 135 | 0.027 | 5.00 |
| | 140 | 0.027 | 5.19 |
| | 145 | 0.027 | 5.37 |
| | 150 | 0.027 | 5.56 |
| | 155 | 0.027 | 5.74 |
| | 160 | 0.027 | 5.93 |
| | 165 | 0.027 | 6.11 |
| | 170 | 0.027 | 6.30 |
| | 175 | 0.027 | 6.48 |
| | 180 | 0.027 | 6.67 |
| | 185 | 0.027 | 6.85 |
| | 190 | 0.027 | 7.04 |
| | 195 | 0.027 | 7.22 |
| | 200 | 0.027 | 7.41 |

Note: Test conducted, acc. to EN 14315-1: 2013

APPLICATION INFORMATION

| | | |
|--------------------------------|--|--------|
| Mixing ratio | Comp. A : Comp. B = 1 : 1 by volume | |
| Ambient air temperature | Minimum | +8 °C |
| | Maximum | +35 °C |
| Dew point | Beware of condensation. Substrate temperature must be +3 °C above dew point. | |
| Substrate temperature | Minimum | +8 °C |
| | Maximum | +35 °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.

IMPORTANT CONSIDERATIONS

- Application is by 2-part hot spray equipment only. For spray application, the use of protective health and safety equipment is mandatory
- Always refer to the manufacturer's instructions before the use of tools and mixing equipment
- Products shall only be applied in accordance with their intended use
- Do not apply Sikatherm® Foam 50 MP on substrates with rising moisture
- Product shall be used in conjunction with a safe system of work. Ensure an adequate assessment of all site risks have been conducted prior to work commencing. Refer to the product safety data sheet for further guidance
- Sikatherm® Foam 50 MP is not UV resistant and changes colour under UV exposure. Provide a suitable Sikalastic® protective top coat as early as possible. Please, consult our Technical Department for more information. Do not apply the product on top of FPO and PVC materials
- Do not apply the product in close proximity to the air intakes of functioning air conditioning systems
- Do not apply the product in windy conditions above approx. 5 m/sec

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

The substrate must be clean, dry, free from dirt, dust, oil, grease, damaged coatings, surface treatments or any other contaminants that can prevent the adhesion.

Broadcasted bituminous membranes

Only broadcasted bituminous membranes are allowed, which must be dimensionally stable and properly fixed to the substrate. In case of loose areas, provide a suitable fixing (e.g. mechanical) method. Power-washing is mandatory.

Concrete and tiles

Remove mechanically all loose part and laitance. Glazed tiles must be mechanically prepared (e.g. grinding) to get a sufficiently rough surface. Remove any dust by vacuum cleaning. Superficially weak substrate can be primed with Sikalastic® Primer MP or other suitable Sika® primer.

Metal

Power-washing is mandatory. Remove any oxidation by abrasion. Remove any dust by vacuum cleaning. Apply Sikalastic® Metal Primer or other suitable Sika® primer on all metal substrates. In case of existing coatings, adhesion strength should be sufficient enough and preliminary adhesion tests ("peeling") are mandatory. Contact our Technical Department for further information

APPLICATION

Once sprayed by suitable mixing gun & equipment, the two-component mixture expands and creates a rigid foam layer on the substrate. The application must be carried out by suitable equipment (bi-mixer) for hot spray two-component products. The equipment used must be able to supply the necessary pressure and adequate heating of hoses. Both components, in the drums and in the hoses, must be heated to 40 – 45 °C. The correct mixing ratio (1:1 by vol.) must be kept constant by proper pumping equipment. It is recommended to use a suitable air dryer filter on the component A (Isocyanate) to protect the component from moisture. Provide suitable elastic systems to cover joints, fittings or cracks, subject to significant movements. For further information, please contact Sika Technical Service.

Especially at low temperatures, it is advisable to apply and to let polymerize a first thin layer of product (~3 mm thickness), in order to help the anchoring of successive thick layers. The thickness of each layer must not exceed 3 cm. If the total thickness of the insulation layer is expected to be >6 cm, each single coat must not exceed 2 cm thickness. Before applying a new coat, wait for the polymerization of the underlying one, which must have cooled (<30 °C)

Curing time

| | |
|-------------------|---------------------------|
| Cream time | 5 – 10 s |
| Gel time | 16 – 22 s |
| Touch-dry time | 18 – 25 s |
| Free rise density | 30 – 40 kg/m ³ |

Note: Times (acc. to EN 14315-1 All. E) are approximate and will be affected by ambient conditions differentiation, particularly temperature and relative humidity.

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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