

PRODUCT DATA SHEET

SikaFill®-300 Thermic

THERMAL INSULATION AND WATERPROOFING FOR ROOFS AND TERRACES THAT CONTRIBUTE TO THE REDUCTION OF TEMPERATURE AND CONDENSATION.

DESCRIPTION

Flexible liquid membrane with microspheres that favor thermal insulation contributing to the reduction of temperature and condensation, with the ability to bridge cracks up to 0.7 mm. External certification Paslink Cell Test.

USES

- As a thermal insulator that contributes to the reduction of temperature and condensation. It can reduce the temperature up to 20 % ⁽¹⁾
- Waterproofing of covers on different types of supports:
 - Concrete
 - Mortar
 - Fiber cement tile
 - Brick zinc tile
- As protection in asphalt waterproofing and waterproofing in polyurethanes
- Side walls in party walls

⁽¹⁾ These values are an approximation that can vary depending on the type of surface and the actual conditions and their use can vary considerably, this estimate is only indicative and the actual temperature reduction could be shorter or extend beyond what was previously stated.

CHARACTERISTICS / ADVANTAGES

- Reduction of temperature and condensation because it is a product based on a new technology with polymeric microspheres
- Material with low thermal conductivity and high reflectivity of solar radiation
- The ability to bridge cracks up to 0.7 mm
- Excellent impermeability to rainwater or condensation
- Resistant to weathering and UV rays
- Easy cold application
- Excellent coverage applied in the recommended amounts
- Low intensity so it generates lower product consumption compared to other waterproofing systems (acrylics, asphalts and polyurethanes)
- Easy maintenance

APPROVALS / STANDARDS

Classification USGB LEED, SikaFill®-300 Thermic conforms to the requirements LEED EQ, credit 4.2: Low emission materials Paints & coatings VOC <100 g / l

PRODUCT INFORMATION

Packaging	12 kg pail
Colour	White, grey, red
Shelf Life	18 months in the original container
Storage Conditions	18 months in its original packaging, tightly closed in a cool place and indoors. Transport with normal precautions for chemical products
Density	0.90 ± 0.02 g/ml approx.
Solid content by volume	60 ± 2 %
Viscosity	28 000–32 000 cPs

TECHNICAL INFORMATION

Tensile Resistance 1 Mpa

Elongation at Break 100 %

APPLICATION INFORMATION

Drying Time	Touch-dry time	2 hours (20 °C and 65 % r.h.)
	Drying time between layers	3–5 hours (20 °C and 65 % r.h.)
	Final drying time	24 hours

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

Cementitious substrate

- New concrete should be cured for at least 28 days and should have a pull off strength $\geq 1.5 \text{ N/mm}^2$.
- Cementitious or mineral based substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and to achieve an open textured surface.
- Loose friable material and weak concrete must be completely removed and surface defects such as blowholes and voids must be fully exposed.
- Repairs to the substrate, filling of joints, blowholes/voids and surface levelling must be carried out using appropriate products from the Sika-floor®, SikaDur® and Sikagard® range of materials.
- High spots must be removed by e.g. grinding.
- Outgassing is a naturally occurring phenomenon of concrete that can produce pinholes in subsequently applied coatings. The concrete must be carefully assessed for moisture content, air entrapment, and surface finish prior to any coating work. Installing the membrane either when the concrete temperature is falling or stable can reduce outgassing. It is generally beneficial, therefore, to apply the embedment coat in the late afternoon or evening.
- Prime the substrate and always use a reinforced system.

Brick and stone

- Mortar joints must be sound and preferably flush pointed. Use localized reinforcement over joints and prime before applying SikaFill®-300 Thermic.

Slates, tiles, etc.

- Ensure all slates/tiles are sound and securely fastened, replacing obviously broken or missing sections. Fully glazed tiles must be abraded prior to priming and subsequent treatment with SikaFill®-300 Thermic.

Metals

- Metals should be in sound condition. Abrade the exposed surfaces to reveal bright metal. Use locally reinforcement over joints and fixings.

Paints / coatings

Ensure the existing material is sound and firmly adhered. Remove any oxidized layers and use localized reinforcement over joints.

APPLICATION

On concrete

▪ Primer

Dilute the SikaFill®-300 Thermic product between 15 % and 20 % of potable water in volume and apply with roller, broom or brush on the surface, ensuring that it penetrates well in all the porosities of the substrate, cracks and cracks.

▪ Reinforced Coating

Apply the pure product in one or two layers, ensure a maximum consumption of 0.3 kg/m per layer. When the first coat is cool, install the Sikafelt FPP-30 reinforcement. The product should be applied without pressing the roller or brush against the surface to allow the amount of product required per layer to be applied. Allow to dry completely between layers (Approx 3 hours at 20 °C and 65 % relative humidity), apply two additional layers each of 0.3 kg/m. This waterproofing with a polyethylene, geotextile or similar, and place new mortar of 3 cm and a hard finish.

▪ Coating

SikaFill®-300 Thermic can be used as a cover coating to achieve a UV-stable layer, to extend the service life of existing roofs or as a reflective lining to improve energy efficiency.

Apply SikaFill®-300 Thermic in one or more layers with a total consumption $\geq 0.9 \text{ kg/m}^2$, maximum 0.3 kg/m²/layer. The first layer should be allowed to cure before applying the next.

Note: Make sure that the existing system is firmly attached or mechanically fixed to the support. Bituminous coatings should not be sticky or with loose parts, volatile coatings or old asphalt coatings. Print and use a fully reinforced system.

On other supports

▪ On zinc tile

The zinc tile must be resistant. The exposed surfaces must be prepared until a white metal surface is left. Use localizacin reinforcements on the joints and fixings.

▪ About brick and stone

The mortar joints must be resistant and preferably a cleaning will be carried out. Use localized reinforcement on the joints and print before SikaFill®-300 Thermic application. The surface must be free of dust or particulate material.

▪ About paints / coatings

Make sure the existing material is strong and firmly attached. Remove any remaining rust and use localized reinforcements on the joints.

Support	Pre-treatment
Galvanized metal, aluminum, copper, stainless steel	Mechanically sanding and approved metal primer
Brick and stone	Not necessary
Paints / coatings	Mechanically sanding
Tile and slates	Mechanically sanding

Consumption and durability

These consumptions are a theoretical approximation that can vary depending on the type of substrate, the roughness of the surface and the methods of application.

Stage of the system	Reinforced system on concrete	Coating system
Primer	0.2 kg/m ²	Depends on types of substrate
First layer Ref. Sikafelt FPP-30	0.3 kg/m ²	0.3 kg/m ²
Second layer	0.3 kg/m ²	0.3 kg/m ²
Third layer	0.3 kg/m ²	0.3 kg/m ²
Total	1.1 kg/m²	0.9 kg/m²

IMPORTANT CONSIDERATIONS

- The air temperature must be between +5 °C and +35 °C and must be descending.
- If applied at rising temperatures, bubbles may appear due to air expansion.
- Atmospheric humidity must be less than 80 %
- The ambient temperature during application must be at least +3 °C above the dew point.
- Pay attention to temperature changes and direct sunlight, as they may affect the application.
- Protect the product from rain for at least 8 hours (at 20 °C) after application.
- The surface must be dry and the humidity of the support must be < 4 % without rising humidity.
- The product should not be used when there is permanent or continuous traffic of people (only for pedestrian or occasional traffic - maintenance personnel)
- Do not apply cementitious products directly on the SikaFill®-300 Thermic in case of hard finish insulate with a high density polyethylene or with a geotextile. Keep out of the reach of children Add potable water to the product only for priming.
- The tools must be washed with water immediately after they are used, once they have been cleaned by mechanical means.
- SikaFill®-300 Thermic should not be used in places where it is in permanent contact with water, either by storage, impoundment or condensation.
- Do not place any type of sharps on the waterproofing.

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- To maintain the color and achieve the expected durability the product should be applied according to the indicated.

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.

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.

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.

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.