

PRODUCT DATA SHEET

Sikatherm[®]-60 Spray Foam HFO

TWO-COMPONENTS POLYURETHANE INSULATION RIGID FOAM WITH CLOSED CELLS FOR HOT SPRAY APPLICATION

DESCRIPTION

Two-components polyurethane rigid foam for spray application, expanded by HFO blowing agent, free from components which contribute to global warming or depleting the ozone layer.

USES

- Thermal insulation of floors, roofs, walls and ceilings
- Continuous layer on irregular substrates before waterproofing systems

CHARACTERISTICS / ADVANTAGES

- Expanded by HFO blowing agent which not contributes to global warming or depleting the ozone layer
- High density
- Very rapid curing time
- High thermal insulating power
- Continuous layer
- Waterproof
- Permeable to water vapour
- High stability
- Excellent adhesion on most of substrates

APPROVALS / CERTIFICATES

CE marked according to EN14315-1

PRODUCT INFORMATION

Composition	Two-components polyurethane foam expanded by HFO blowing agent	
Packaging	Component A (Resin):	230 kg drum / 1000 kg cube
	Component B (Iso):	250 kg drum / 1200 kg cube
Colour	Component A (Resin):	yellow transparent
	Component B (Iso):	brown transparent
Shelf life	Component A (Resin):	3 months
	Component B (Iso):	6 months
Storage conditions	Stored in closed, sealed and undamaged packaging, in dry conditions at temperatures between +10 °C and +25 °C. Protect from frost and from direct exposure to sunlight. Storage at temperature higher than required, can reduce the shelf life.	

Density	Component A (Resin):	~ 1,2 kg/L (at +25°C)
	Component B (Iso):	~ 1,3 kg/L (at +25°C)
Density of polymerized product (A+B):		
Density after free expansion (at +20°C)		~ 60 kg/m ³

TECHNICAL INFORMATION

Compressive Strength	≥ 500 kPa (10% deformation)	(UNI EN 826)
Dimensional Stability	Thickness shrinkage ≤ 5 % (at ~70°C / 40 kPa / ~170h)	(EN 1605)
Reaction to Fire	Class: E	(EN 13501-1)
Thermal Conductivity	See Declaration of Performance	(EN 14315-1)
Diffusion Resistance to Water Vapour	μ = ~80	(EN 12086)
Water Absorption	≤ 0,20 kg/m ²	(EN 1609)

SYSTEMS

System Structure	The thickness of the insulating spray coat has to be defined by designer, according to project requirements and product performances.
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APPLICATION INFORMATION

Ambient Air Temperature	Minimum +5°C
Substrate Temperature	Minimum +5°C Beware of condensation. Substrate temperature must be +3 °C above dew-point

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

The substrate must be clean, dry, free from dirt, oxide (rust), dust, oil, grease, damaged coatings, incompatible surface treatments or any other contaminants preventing the adhesion.

Broadcasted bituminous membranes

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

Concrete and tiles

Concrete must be matured 28 days, structurally and dimensionally stable, with humidity content < 5%. Remove mechanically any loose part and laitance. Glazed tiles must be mechanically abraded (by grinding) to get a sufficiently rough surface. Remove any dust by vacuum cleaning. The surface of weak substrates can be primed by Sika® Primer Roof PU or other suitable Sika® Primer.

Metal

Power-washing is mandatory. Remove any oxidation by abrasion pad. Apply Sikalastic® Metal Primer on all metal substrate. In case of existing coatings, they must be well in adhesion and preliminary adhesion tests ("peeling") are mandatory. Contact our Technical Service for further information.

APPLICATION METHOD / TOOLS

Once sprayed by suitable mixing gun & equipment, two components expand and create a rigid foam layer on 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 (~100 bar), and adequate heating of hoses. Both components, both in the drums and in the hoses must be heated to ~40°C. **The correct mixing ratio (1:1 in volume) must be kept constant and checked during whole application.** Tune on each component temperature to modify its viscosity to get equal pressure for both components. Do not apply in case of air humidity >85%, temperature >40°C and wind speed >30 km/h.

It is recommended to use a suitable air dryer filter on the ISO component (isocyanate) to protect the component from moisture. Provide suitable elastic systems to cover joints, fittings, or cracks subject to signi-

ficant movements. Contact the Technical Service for more information.
Especially at low temperatures it is advisable to apply and let polymerize a first thin layer of product (~3 mm), in order to help the anchoring of successive thick layers.
Optimal distance from spraying gun and substrate: 80 cm. The thickness of each layer must not exceed 3 cm. If the total final thickness of the insulating layer is expected to be >6 cm, each single layer must not exceed 2 cm thickness. Before applying a new layer, wait for the polymerization of the underlying one, which must have cooled (<30 ° C).

Curing time

Gel time	~5 seconds
Touch dry time	~10 seconds

Note: times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.

IMPORTANT CONSIDERATIONS

- Application is designed for 2-part hot spray equipment only.
- Before planning and using Sikatherm®-60 Spray Foam HFO on vapour permeable substrates it's mandatory to check and exclude any risk of inner condensation (by carrying out a diagram of Glaser).
- For spray application the use of protective health and safety equipment is mandatory.
- Always refer to the manufacturer's instructions before use the tools and mixing equipment. Off-site trials before application is mandatory to check settings according to expected performances.
- Products shall only be applied in accordance with their intended use.
- Do not apply Sikatherm®-60 Spray Foam HFO on substrates with rising moisture.
- Stir component A (polyol) by mechanical mixer before use.
- Product shall be used in conjunction with a safe system of work. Ensure an adequate assessment of all site risks has been conducted prior to work commencing. Refer to the product safety datasheet for further guidance.
- Sikatherm®-60 Spray Foam HFO is not UV light resistant and changes colour under UV exposure. Provide a suitable Sikalastic® protective top-coat as early as possible. Contact the Technical Service for more information.
- Do not apply on FPO and PVC surfaces.
- Do not apply near to air intakes of running air conditioning systems.
- Do not apply in windy conditions (max wind speed: 30 km/h).

- Any alteration of mixing ratio can lead to performance different from what declared.
- Empty packaging must be disposed of in accordance with national and local regulation. In no case empty packaging can be left in the environment. Rigid expanded polyurethane, cured ratio of 100: 100 (volume), is a stable and non-biodegradable polymer, which does not release substances that are dangerous for the environment. Any solid waste can be treated as special waste.

Important:

Further to the information provided in this document, the users must follow strictly the application instructions provided by latest version of ANPE Manual "Rigid Expanded Polyurethane - Guidelines for the correct application in situ: Spray, Casting". The user will also have to comply with UNI EN 14315 for a complete description of the mandatory requirements, control methods and calculation and for the correct completion of the declaration to be issued to the client at the end of the work.

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.

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