

PRODUCT DATA SHEET

Sikasil®-670 Fire

FIRE RATED JOINT SEALANT



DESCRIPTION

Sikasil®-670 Fire is a fire rated, 1-component, moisture-curing, low-modulus elastic joint sealant.

USES

Sikasil®-670 Fire is designed for fire rated movement and connection joints on porous and non-porous substrates.

CHARACTERISTICS / ADVANTAGES

- Up to 4 hours fire resistance according to EN 1366-4
- Very good resistance to weathering
- Movement capability of $\pm 35\%$ (ASTM C 719)
- Easy to smooth and very good workability
- Good adhesion to many different substrates
- Neutral curing

SUSTAINABILITY

- LEED v4 EQc 2: Low-Emitting Materials

APPROVALS / CERTIFICATES

- EN 15651-1 F EXT-INT CC 25 LM
- EN 15651-4 PW INT
- ISO 11600 F 25 LM & G 25 LM
- ASTM C 920, class 35
- EN 1366-4 assessment report
- ETA (ETAG 026)
- UL listing (UL 2079)
- EN 13501-2 classification report
- EN 140-3

PRODUCT INFORMATION

| | |
|---------------------------|---|
| Composition | Neutral cure silicone |
| Packaging | 600 ml foil pack, 20 foil packs per box 300 ml cartridge, 12 cartridges per box |
| Colour | White, grey, black Please contact our customer service, for information on which colors are sold in Denmark. |
| Shelf life | Sikasil®-670 Fire has a shelf life of 12 months from the date of production, if it is stored in undamaged, original, sealed packaging, and if the storage conditions are met. |
| Storage conditions | Sikasil®-670 Fire shall be stored in dry conditions, where it is protected from direct sunlight and at temperatures between +5 °C and +25 °C. |
| Density | ~1.35 kg/l (ISO 1183-1) |

TECHNICAL INFORMATION

| | | |
|-----------------------------|---|----------------------------|
| Shore A Hardness | ~20 (after 28 d) | (ISO 868) |
| Secant Tensile Modulus | ~0.30 N/mm ² at 100 % elongation (23 °C) ~0.50 N/mm ² at 100 % elongation (-20 °C) | (ISO 8339) |
| Elongation at Break | ~650 % | (ISO 37) |
| Elastic Recovery | ~70 % | (ISO 7389) |
| Tear Propagation Resistance | ~4.0 N/mm | (ISO 34) |
| Movement Capability | ± 25 % ± 35 % | (ISO 9047) (ASTM C 719) |
| Service Temperature | -40 °C min. / +150 °C max. | |

Joint Design

The joint width must be designed to suit the joint movement required and the movement capability of the sealant. The joint width shall be ≥ 10 mm and ≤ 40 mm. The joint depth shall be ≤ 20 mm. A width to depth ratio of 2:1 must be maintained (for exceptions, see table below).

Standard joint widths for joints between concrete elements:

| Joint distance [m] | Min. joint width [mm] | Min. joint depth [mm] |
|--------------------|-----------------------|-----------------------|
| 2 | 10 | 10 |
| 4 | 15 | 10 |
| 6 | 20 | 10 |
| 8 | 30 | 15 |
| 10 | 35 | 17 |

All joints must be correctly designed and dimensioned in accordance with the relevant standards, before their construction. The basis for calculation of the necessary joint widths are the type of structure and its dimensions, the technical values of the adjacent building materials and the joint sealing material, as well as the specific exposure of the building and the joints.

For larger joints please contact our Sika Technical Service.

APPLICATION INFORMATION

| | | | |
|-------------------------|---|------------------|--|
| Consumption | Joint width [mm] | Joint depth [mm] | Joint length [m] per 600 ml foil pack |
| | 10 | 10 | 6 |
| | 15 | 10 | 4 |
| | 20 | 10 | 3 |
| | 25 | 12 | 2 |
| | 30 | 15 | 1.3 |
| Backing Material | Use polyethylene foam backing rods. | | |
| Sag Flow | ~2 mm (20 mm profile, 50 °C) | | (ISO 7390) |
| Ambient Air Temperature | +5 °C min. / +40 °C max. | | |
| Substrate Temperature | +5 °C min. / +40 °C max., min. 3 °C above dew point temperature | | |
| Curing Rate | ~2 mm/24 hours (23 °C / 50 % r.h.) | | (CQP 049-2) |
| Skimming time | ~25 min (23 °C / 50 % r.h.) | | (CQP 019-1) |
| Tooling Time | ~20 min (23 °C / 50 % r.h.) | | (CQP 019-2) |

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

The substrate must be clean, dry, sound and homogeneous, free from oils, grease, dust and loose or friable particles. Sikasil®-670 Fire adheres without primers and/or activators.

APPLICATION METHOD / TOOLS

Sikasil®-670 Fire is supplied ready to use. After the necessary substrate preparation, insert a suitable backing rod to the required depth and apply any primer if necessary. Insert a foil pack or cartridge into the sealant gun and extrude Sikasil®-670 Fire into the joint making sure that it comes into full contact with the sides of the joint and avoids any air entrapment. Sikasil®-670 Fire sealant must be firmly tooled against the joint sides to ensure adequate adhesion. It is recommended to use masking tape where exact joint lines or neat lines are required. Remove the tape within the skin time. Do not use tooling products containing solvents.

CLEANING OF EQUIPMENT

Clean all tools and application equipment immediately after use with Sika® Remover-208. Once cured, residual material can only be removed mechanically. For cleaning skin use Sika® Cleaning Wipes-100.

FURTHER INFORMATION

- Safety Data Sheet (SDS)
- EN 13501-2 classification report
- ETAG 026 assessment report
- Brochure Sika Fire Protection Solutions

IMPORTANT CONSIDERATIONS

- Sikasil®-670 Fire cannot be overpainted.
- Colour variations may occur due to exposure to chemicals, high temperatures and/or UV-radiation (especially with the colour shade white). However, a change in colour is purely of aesthetic nature and does not adversely influence the technical performance or durability of the product.
- Do not use Sikasil®-670 Fire on natural stone.
- Do not use Sikasil®-670 Fire on bituminous substrates, natural rubber, EPDM rubber or on any building materials which might bleed oils, plasticizers or solvents that could attack the sealant.
- Do not use Sikasil®-670 Fire to seal joints in and around swimming pools.
- Do not use Sikasil®-670 Fire for joints under water pressure or for permanent water immersion.

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- Do not expose uncured Sikasil®-670 Fire to alcohol containing products as this may interfere with the curing reaction.

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 declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

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

Any information or suggestions for use concerning Sika's products, which we either in writing or orally have given buyers or end-users of the product, have been given in good faith based on our own experiences and based on approved praxis and the technological and scientific knowledge on the time of giving such suggestions and information, which are given without any type of guarantees, and which do not lead to any further responsibility from Sika Danmark A/S, besides what is stated in the sales agreement in question. The buyer or end-user should themselves investigate or otherwise make sure, that our products are suitable for the use in question and further make sure that the products are kept and used correct and in agreement with the published rules and considering the actual conditions in order to avoid damages or less satisfactory results. Any order is accepted and any deliverance is affected according to the general terms of sales and delivery from Sika Danmark A/S, which are considered known and accepted, and which could be handed out when asked for. Our catalogues are not up-dated automatically. The present product data sheet is only for use in Denmark. Values stated in the present product data sheet should be seen as recommended, unless stated otherwise.

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