BUILDING TRUST

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 ± 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	
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.	
Colour	White, grey, black	
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/mm² at 100 % elongation (23 °C) ~0.50 N/mm² at 100 % elongation (−20 °C)	(ISO 8339)
Tensile strain at break	~650 %	(ISO 37)
Movement capability	± 25 % ± 35 %	(ISO 9047) (ASTM C 719)
Elastic recovery	~70 %	(ISO 7389)
Tear propagation resistance	~4.0 N/mm	(ISO 34)
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

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	
Backing material	Use polyethylene foam backing rods.	
Curing rate	~2 mm/24 hours (23 °C / 50 % r.h.)	(CQP 049-2)
Skinning time	~25 min (23 °C / 50 % r.h.)	(CQP 019-1)
Tooling time	~20 min (23 °C / 50 % r.h.)	(CQP 019-2)

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

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

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

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.

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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.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

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.