BUILDING TRUST

PRODUCT DATA SHEET

Sikasil®-670 Fire

Fire-rated joint sealant

PRODUCT DESCRIPTION

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

USES

Sikasil®-670 Fire is used for sealing the following types of joints:
- Fire-rated movement joints.
- Fire-rated connection joints.

Sikasil®-670 Fire is used on the following substrates:
- Porous substrates.
- Non-porous substrates.

Sikasil®-670 Fire is used for interior and exterior applications.

CHARACTERISTICS / ADVANTAGES

- Up to 4 hours fire resistance according to EN 1366-4 depending on the configuration.
- 25 LM sealant; maintains up to 25 % lateral movement capability during fire testing.
- Movement capability of ±35 % (ASTM C 719).
- Good adhesion to many construction materials.
- Very good resistance to weathering.

ENVIRONMENTAL INFORMATION

- Contributes towards satisfying Indoor Environmental Quality (EQ) Credit: Low-Emitting Materials under LEED® v4 — 1–3 points.
- Environmental Product Declaration (EPD) in accordance with EN 15804. EPD independently verified by Institut für Bauen und Umwelt e.V. (IBU).

APPROVALS / STANDARDS

- DoP Sikasil®-670 Fire – EAD 350141-00-1106:2017 – 56464597 – en.
- Fire Testing EN 13501-1, Sikasil-670 Fire, CSTB, Report No RA15-0053.
- UL Product iQ, XHBN.HW-S-0114 - Joint Systems, System No. HW-S-0114.
- CE marking and declaration of performance based on EN 15651-1:2012 Sealants for non-structural use in joints in buildings and pedestrian walkways — Part 1: Sealants for facade elements.
- CE marking and declaration of performance based on EN 15651-2:2012 Sealants for non-structural use in joints in buildings and pedestrian walkways — Part 2: Sealants for glazing.
- CE marking and declaration of performance based on EN 15651-4:2012 Sealants for non-structural use in joints in buildings and pedestrian walkways — Part 4: Sealants for pedestrian walkways.
- Airborne Sound Transmission EN 140-3, Sikasil-670 Fire, UKAS, Report No C/20664/R.

PRODUCT INFORMATION

Chemical Base	Neutral cure silicone
Packaging	600 mL foil pack, 12 foil packs per box. 380 mL cartridge, 25 cartridges per box. 300 mL cartridge, 12 cartridges per box.
Colour	White, grey, black
Shelf Life	12 months from date of production

Storage Conditions	The Product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +25 °C. Always refer to the packaging. Refer to the current Safety Data Sheet for information on safe handling and storage.	
Density	1.35 kg/L	(ISO 1183-1)
Product Declaration	EN 15651-1 — F EXT-INT CC 25 LM EN 15651-2 — G CC 25 LM EN 15651-4 — PW INT CC 25 LM ISO 11600 — F 25 LM G 25 LM	

TECHNICAL INFORMATION

Shore A Hardness	20 (after 28 days)	(EN ISO 868)
Secant Tensile Modulus	100 % elongation at +23 °C — 0.30 N/mm² 100 % elongation at −20 °C — 0.50 N/mm²	(ISO 8339)
Elongation at Break	650 %	(ISO 37)
Elastic Recovery	70 %	(EN ISO 7389)
Movement Capability	± 25 % ± 35 % ± 25 %	(EN ISO 9047) (ASTM C719) (EN 1366-4)
Reaction to Fire	Class B -s2, d0	(EN 13501-1)
Resistance to fire	Refer to the section 'Certificates and test reports' or contact Sika Technical Services for specific information.	
Sound Insulation	$Rw(C;C_{tr})$ = 38(-2;-9)	
Service Temperature	Maximum — +150 °C Minimum — -40 °C	

APPLICATION INFORMATION

Backing Material	Use closed cell, polyethylene foam backing rod.	
Sag Flow	20 mm profile, +50 °C — 2 mm	(EN ISO 7390)
Product Temperature	Maximum — +40 °C Minimum — +5 °C	
Ambient Air Temperature	Maximum — +40 °C Minimum — +5 °C	
Substrate Temperature	Maximum — +40 °C Minimum — +5 °C The substrate temperature must be +3 °C above dew point temperature and free from frost and ice.	
Skin Time	+23 °C and 50 % r.h. — 25 minutes	(CQP019-1)
Tooling Time	+23 °C and 50 % r.h. — 20 minutes	(CQP019-2)

VALUE BASE

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.

FURTHER DOCUMENTS

- Brochure: Sika Fire Stopping Solutions

LIMITATIONS

- 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

IMPORTANT

Poor adhesion due to incorrect priming procedure

Incorrectly defined or uncontrolled priming procedures may lead to a variation in product performance.

1. Test adhesion on project-specific substrates and agree on procedures with all parties before full project application. For more information contact Sika Technical Services.

Poor adhesion due to inadequate surface preparation

Note: Primers are adhesion promoters. Primers cannot replace proper surface preparation and surface cleaning.

1. Do not use primers for improving poorly prepared or poorly cleaned joint surfaces.

The substrate must be sound, clean, dry and free of contaminants such as dirt, oil, grease, cement laitance, sealant residues and poorly bonded coatings which could affect adhesion of the primer and sealant.

The substrate must be of sufficient strength to withstand the stress induced by the sealant during movement.

1. Use techniques such as wire brushing, grinding, grit blasting or other suitable mechanical methods to remove all weak substrate material.
2. Repair all damaged joint edges with suitable Sika repair products.
3. Remove dust, loose and friable material from all surfaces before applying the sealant.

If tested or supported by experience, the product can be used without primers or activators on many substrates.

APPLICATION

IMPORTANT

Strictly follow installation procedures

Strictly follow installation procedures as defined in Method Statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

IMPORTANT

Staining on natural stone substrates due to plasticiser migration

Staining from plasticiser migration may occur when used on cast, reconstituted or natural stone such as granite, marble or limestone substrates.

1. Do not use on natural stone substrates

IMPORTANT

Degradation of sealant due to substrates leaching oil, plasticisers, or solvents

Bitumen, natural rubber or EPDM rubber can leach oils, plasticisers, or solvents that can degrade the sealant and cause the product to become tacky.

1. Do not use the product on building materials which leach oils, plasticisers, or solvents.

IMPORTANT

Degradation of sealant due to chemical attack

1. Do not use the product to seal joints in and around swimming pools containing water treatment agents such as chlorine.

IMPORTANT

Insufficient curing due to exposure to alcohol

Exposure to alcohol during curing may interfere with the curing reaction and cause the product to remain soft or become tacky.

1. Do not expose the product to alcohol-containing products during the curing period.

IMPORTANT

Material failure due to insufficient air humidity

Air humidity is required for the product to cure.

1. Do not use the product in a totally confined space.

Delayed skin formation and curing time due to changing ambient conditions

Note: Changing ambient conditions can affect product performance. Skin formation and curing time can be significantly delayed by low humidity, low temperature and large joint dimensions.

1. Apply masking tape where neat or exact joint lines are required.
2. After the required substrate preparation, insert a backing rod to the required depth.
3. Prime the joint surfaces as recommended in substrate preparation. Note: Avoid excessive application of the primer.
4. Open the seal on the top of the cartridge or open the

end of the foil pack.
5. Fit the nozzle and cut it to the desired bead size.
6. Insert the product into the application gun.
7. Apply the product into the joint. Note: Avoid air entrapment. Make sure that the product comes into full contact with the adhesion area of the joint.
8. IMPORTANT: Do not use tooling products containing solvents. As soon as possible after application, tool the product firmly against the joint sides to ensure adequate adhesion and a smooth finish. Use a compatible tooling agent such as Sika® Tooling Agent N to smooth the joint surface.
9. Remove the masking tape within the skin formation time of the product.

Colour variation

Note: Colour variation may occur especially with white or other light colour shades. This effect is purely aesthetic and does not adversely influence the technical performance or durability of the product.

CLEANING OF TOOLS

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

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.

SIKA LIMITED
Watchmead
Welwyn Garden City
Hertfordshire, AL7 1BQ
Tel: 01707 394444
Web: www.sika.co.uk
Twitter: @SikaLimited