

Sikasil[®] FS-665

Fire-rated Sealant

Technical Product Data

Chemical base	1-C silicone	
Colour (CQP ¹ 001-1)	Grey, Black	
Cure mechanism	Moisture-curing	
Cure type	Neutral	
Density (uncured) (CQP 006-4)	1.47 kg/l approx.	
Non-sag properties (CQP 061-4 / ISO 7390)	< 2 mm	
Application temperature	5 - 40°C (40 - 105°F)	
Skin time ² (CQP 019-2)	15 min approx.	
Tack-free time ² (CQP 019-1)	120 min approx.	
Curing speed (CQP 049-1)	See diagram 1	
Shore A-hardness (CQP 023-1 / ISO 868)	25 approx.	
Tensile strength (CQP 036-1 / ISO 37)	1.2 N/mm ² approx.	
Elongation at break (CQP 036-1 / ISO 37)	700% approx.	
Tear propagation resistance (CQP 045-1 / ISO 34)	4.0 N/mm approx.	
100% modulus (CQP 036-1 / ISO 37)	0.4 N/mm ² approx.	
Movement accommodation capability (ASTM C 719)	±25%	
Thermal resistance (CQP 513-1)	4 hours 1 hour	180°C (355°F) approx.
Short term		200°C (390°F) approx.
		220°C (430°F) approx.
Service temperature	-40 - 150°C approx. (-40 - 300°F)	
Shelf life (storage below 25°C) (CQP 016-1)	12 months	

¹⁾ CQP = Corporate Quality Procedure

²⁾ 23°C (73°F) / 50% r.h.

Description

Sikasil[®] FS-665 is a fire-rated, neutral-curing, low-modulus silicone sealant with excellent adhesion to a wide range of porous and non-porous substrates.

Sikasil[®] FS-665 is manufactured in accordance with ISO 9001 quality assurance system and the responsible care program.

Product Benefits

- Fire rated: EN 11925-2 / DIN 4102-B1; up to 4 hours insulation and integrity (BS 476, part 20)
- Meets requirements of ISO 11600 25 LM F & G, ASTM C 920 (class 25), TT-S00230C, TT-S001543A
- Outstanding UV and weathering resistance

Areas of Application

Sikasil[®] FS-665 is ideal for weatherproofing of curtain walling and facades where fire rating is required. It is especially suitable for sealing of expansion joints, cable and pipe penetrations in fire-rated constructions.

This product is suitable for professional experienced users only. Tests with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.



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Cure Mechanism

Sikasil® FS-665 cures by reaction with atmospheric moisture. The reaction thus starts at the surface and proceeds to the core of the joint. The curing speed depends on the relative humidity and the temperature (see diagram 1 below). Heating above 50°C to speed-up the vulcanization is not advisable as it may lead to bubble formation. At low temperatures the water content of the air is lower and the curing reaction proceeds more slowly.

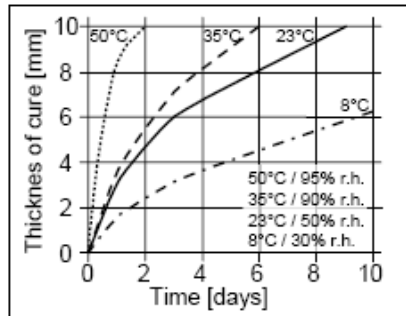


Diagram 1: Curing speed 1C-Sikasil®

Application Limits

Most Sikasil® WS, FS, SG, IG, WT, AS and other engineering silicone sealants manufactured by Sika are compatible with each other and with SikaGlaze® IG sealants. For specific information regarding compatibility between various Sikasil® and SikaGlaze® products please contact the Technical Service Department of Sika Industry.

All other sealants have to be approved by Sika before using them in combination with Sikasil® FS-665. Where two or more different reactive sealants are used, allow the first to cure completely before applying the next.

The compatibility of gaskets, backer rods and other accessory materials with Sikasil® FS-665 must be tested in advance.

Joints deeper than 15 mm should be avoided.

The above information is offered for general guidance only. Advice on specific applications will be given on request.

Method of Application

Surface preparation
Surfaces must be clean, dry and free from oil, grease and dust.

Advice on specific applications and surface pre-treatment methods is available from the Technical Service Department of Sika Industry.

Application

After suitable joint and substrate preparation, Sikasil® FS-665 is gunned into place. Joints must be properly dimensioned as changes are no longer possible after construction. For optimum performance the joint width should be designed according to the movement capability of the sealant based on the actual expected movement. The minimum joint depth is 6 mm and a width / depth ratio of 2:1 must be respected.

The achievable fire rating depends on the joint dimensions. For back-filling various materials have been evaluated including open-cell polyurethane foam, ceramic tape and mineral wool.

For more information please contact the Technical Service Department of Sika Industry.

Tooling and finishing

Tooling and finishing must be carried out within the skin time of the adhesive.

When tooling freshly applied Sikasil® FS-665 press the adhesive to the joint flanks to get a good wetting of the bonding surface.

Removal

Uncured Sikasil® FS-665 may be removed from tools and equipment with Sika® Remover-208 or another suitable solvent. Once cured, the material can only be removed mechanically.

Hands and exposed skin should be washed immediately using Sika® Handclean Towel or a suitable industrial hand cleaner and water. Do not use solvents!

Overpainting

Sikasil® FS-665 cannot be over-painted.

Further Information

Copies of the following publications are available on request:

- Material Safety Data Sheet

Packaging Information

Cartridge	300 ml
Unipack	600 ml

Value Bases

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.

Health and Safety Information

For information and advice regarding transportation, handling, storage and disposal of chemical products, users shall refer to the actual Material Safety Data Sheets 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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