

## PRODUCT DATA SHEET

# Sikaflex®-551

## MULTIFUNCTIONAL AND LOW EMISSION STP ADHESIVE

### TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Chemical base		Silane Terminated Polymer
Color (CQP001-1)		White
Cure mechanism		Moisture-curing
Density (uncured)	uncured	1.5 kg/l
Non-sag properties (CQP061-1)		Good
Application temperature	ambient	5 - 40 °C
Skin time (CQP019-1)		35 minutes <sup>A</sup>
Open time (CQP526-1)		20 minutes <sup>A</sup>
Curing speed (CQP049-1)		(see diagram)
Shore A hardness (CQP023-1 / ISO 7619-1)		45
Tensile strength (CQP036-1 / ISO 527)		2.2 MPa
Elongation at break (CQP036-1 / ISO 527)		500 %
Tear propagation resistance (CQP045-1 / ISO 34)		14 N/mm
Tensile lap-shear strength (CQP046-1 / ISO 4587)		1.8 MPa
Service temperature (CQP509-1 / CQP513-1)		-50 - 90 °C
Shelf life (CQP016-1)	Cartridge/Unipack	12 months <sup>B</sup>

CQP = Corporate Quality Procedure

A) 23°C / 50 % r.h.

B) storage below 25 °C

### DESCRIPTION

Sikaflex®-551 is a very low emission one-component adhesive based on the Sika Silane Terminated Polymer (STP) technology that cures on exposure to atmospheric humidity. Sikaflex®-551 not only exceeds common environmental and safety standards it also sets a new benchmark from an EH&S point of view. It is equipped with a fungicide package, which hinders the growth of microorganism in warm and humid environments.

### PRODUCT BENEFITS

- Excellent ageing and weathering resistance
- High fungicidal resistance
- Can be painted
- Very low emission
- Exceeds highest EHS standards
- Free of isocyanate, solvents, PVC, tin and phthalates
- Bonds well to a wide variety of substrates without the need for special pre-treatments
- Highly elastic
- Meets hygiene requirements for ventilation and air-conditioning systems and unit according VDI 6022 Blatt 1:2011-07
- ISEGA certificate for foodstuff area usage

### AREAS OF APPLICATION

Sikaflex®-551 is a multipurpose adhesive sealant designed for general industry bonding and sealing applications. It is suitable for elastic, vibration-resistant joint seals and for a wide variety of interior and exterior sealing applications. It adheres well to a wide variety of substrates and is suitable for interior and exterior elastic bonding applications. Suitable substrate materials include timber, glass, metals, metal primers and paint coatings (2-part systems), ceramic materials and plastics. Seek manufacturer's advice and perform tests on original substrates before using Sikaflex®-551 on materials prone to stress cracking.

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

## CURE MECHANISM

Sikaflex®-551 cures by reaction with atmospheric moisture. At low temperatures the water content of the air is generally lower and the curing reaction proceeds somewhat slower (see diagram 1).

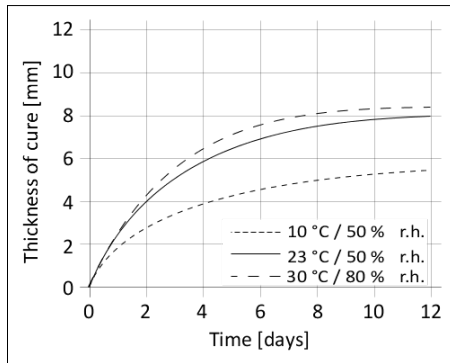


Diagram 1: Curing speed Sikaflex®-551

## CHEMICAL RESISTANCE

Sikaflex®-551 is generally resistant to fresh water, seawater, diluted acids and diluted caustic solutions; temporarily resistant to fuels, mineral oils, vegetable and animal fats and oils; not resistant to organic acids, glycolic alcohol, concentrated mineral acids and caustic solutions or solvents.

## METHOD OF APPLICATION

### Surface preparation

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

Surface treatment depends on the specific nature of the substrates and is crucial for a long lasting bond. Suggestions for surface preparation may be found on the current edition of the appropriate Sika® Pre-treatment Chart. Consider that these suggestions are based on experience and have in any case to be verified by tests on original substrates.

### Application

Sikaflex®-551 can be processed between 5 °C and 40 °C (climate and product) but changes in reactivity and application properties have to be considered. The optimum temperature for substrate and sealant is between 15 °C and 25 °C. For easy application, condition the adhesive at ambient temperature prior to use.

To ensure a uniform thickness of the bond-line it is recommend to apply the adhesive in form of a triangular bead (see figure 1).

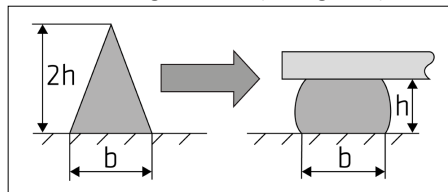


Figure 1: Recommended bead configuration

The open time is significantly shorter in hot and humid climate. The parts must always be installed within the open time. Never join bonding parts if the adhesive has built a skin. Sikaflex®-551 can be processed with hand, pneumatic or electric driven piston guns as well as pump equipment. For advice on selecting and setting up a suitable pump system, contact the System Engineering Department of Sika Industry.

## Tooling and finishing

Tooling and finishing must be carried out within the skin time of the product. It is recommended using Sika® Tooling Agent N. Other finishing agents must be tested for suitability and compatibility prior the use.

## Removal

Uncured Sikaflex®-551 can 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 have to be washed immediately using hand wipes such as Sika® Cleaner-350H or a suitable industrial hand cleaner and water. Do not use solvents on skin!

## Overpainting

Sikaflex®-551 can be best painted within the skin formation time. If painting process takes place after the sealant has built a skin, adhesion could be improved by treating the joint surface with Sika® Aktivator-100 or Sika® Aktivator-205 prior to paint process. If the paint requires a baking process (> 80 °C), best performance is achieved by allowing the sealant to fully cure first. All paints have to be tested by carrying preliminary trials under manufacturing conditions.

The elasticity of paints is usually lower than that of sealants. This could lead to cracking of the paint in the joint area.

## FURTHER INFORMATION

The information herein is offered for general guidance only. Advice on specific application is available on request from the Technical Department of Sika Industry.

Copies of the following publications are available on request:

- Safety Data Sheets
- Sika® Pre-treatment Chart Silane Terminated Polymers
- General Guidelines Bonding and Sealing with 1-component Sikaflex®

## PACKAGING INFORMATION

Cartridge	300 ml
Unipack	600 ml

## BASIS OF PRODUCT DATA

All technical data stated in this document 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 Safety Data Sheets containing physical, ecological, toxicological and other safety-related data.

## DISCLAIMER

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