

## PRODUCT DATA SHEET

## Sikaflex®-545

## HIGH INITIAL GRAB STP ASSEMBLY 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)                                | 1.4 kg/l   |
| Non-sag properties (CQP061-1)                    | Excellent  |
| Application temperature                          | ambient 5 – 40 °C  |
| Skin time (CQP019-1)                             | 15 minutes <sup>A</sup>                                      |
| Open time (CQP526-1)                             | 10 minutes <sup>A</sup>                                      |
| Curing speed (CQP049-1)                          | (see diagram)  |
| Shore A hardness (CQP023-1 / ISO 868)            | 45   |
| Tensile strength (CQP036-1 / ISO 37)             | 2.5 MPa  |
| Elongation at break (CQP036-1 / ISO 37)          | 400 %  |
| Tear propagation resistance (CQP045-1 / ISO 34)  | 7 N/mm   |
| Tensile lap-shear strength (CQP046-1 / ISO 4587) | 1.5 MPa  |
| Service Temperature (CQP509-1 / CQP513-1)        | -50 – 90 °C  |
| Shelf life (CQP016-1)                            | Unipack 12 months <sup>B</sup><br>Drum 9 months <sup>B</sup> |

CQP = Corporate Quality Procedure

<sup>A</sup> 23 °C / 50 % r.h.<sup>B</sup> Storage below 25 °C**DESCRIPTION**

Sikaflex®-545 is a very low emission one-component adhesive based on Sika's Silane Terminated Polymer (STP) technology that cures on exposure to atmospheric humidity. Sikaflex®-545 is a high initial grab adhesive with high load capacity.

**PRODUCT BENEFITS**

- Powerful initial grab
- Very low emission
- Isocyanate, solvent, phthalate free
- Bonds well to a wide variety of substrates without the need for special pre-treatments
- Low odor
- Meets highest EHS standards
- EC1 certificate

**AREAS OF APPLICATION**

Sikaflex®-545 adheres well to a wide variety of substrates and is suitable for bonding applications where a high initial grab is required. 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®-545 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®-545 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).

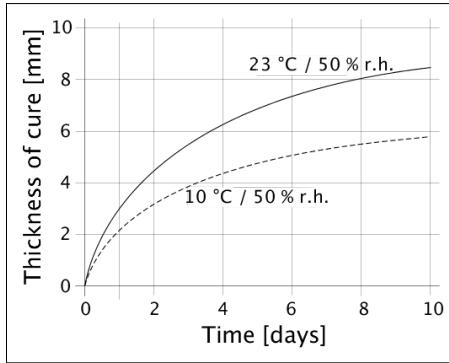


Diagram 1: Curing speed Sikaflex®-545

## CHEMICAL RESISTANCE

Sikaflex®-545 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 and dust. 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

Apply the adhesive with a suitable caulking gun. Take care to avoid air entrapment in the joint.

Sikaflex®-545 can be processed between 5 °C and 40 °C 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 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 adhesive. It is recommended using Sika® Tooling Agent N. Other finishing agents must be tested for suitability and compatibility prior the use.

## Removal

Uncured Sikaflex®-545 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 cleaning towels or a suitable industrial hand cleaner and water. Do not use solvents on skin!

## Overpainting

Sikaflex®-545 can be painted within the skin formation time. If the paint requires a baking process, best performance is achieved by allowing the adhesive 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 of sealants what could lead to cracking of the paint film 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  
For Silane Terminated Polymers (STP)
- General Guideline Bonding  
Sealing with Sikaflex® and SikaTack®

## PACKAGING INFORMATION

|         |        |
|---------|--------|
| Unipack | 600 ml |
| Drum    | 195 l  |

## 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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