BUILDING TRUST

PRODUCT DATA SHEET

Sikaflex®-554

STP assembly bonding adhesive with acceleration option

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Chemical base		Silane Terminated Polymer
Color (CQP001-1)		White, black
Cure mechanism		Moisture-curing
Density (uncured)	depending on color	1.44 kg/l (12.0 lb/gal)
Non-sag properties		Good
Application temperature	ambient	5 – 40 °C (41 – 104 °F)
Skin time (CQP019-1)		25 minutes [A]
Open time (CQP526-1)		20 minutes [A]
Curing speed (CQP049-1)		see diagram 1
Shrinkage (CQP014-1)		2 %
Shore A hardness (CQP023-1 / ISO 48-4)		55
Tensile strength (CQP036-1 / ISO 527)		3.5 MPa (510 psi)
Elongation at break (CQP036-1 / ISO 527)		500 %
Tear propagation resistance (CQP045-1 / ISO 34)		20 N/mm (110 pli)
Tensile lap-shear strength (CQP046-1 / ISO 4587)		2.5 MPa (360 psi)
Service temperature (CQP509-1 / CQP513-1)		-50 – 90 °C (-58 – 194 °F)
Shelf life (CQP016-1)	unipack / cartridge	12 months [B]

CQP = Corporate Quality Procedure

[A] 23 °C (73 °F) / 50 % r. h.

[B] stored below 25 °C (77 °F)

DESCRIPTION

Sikaflex®-554 is an elastic 1-component Silane Terminated Polymer (STP) adhesive system especially designed for bonding large components in industrial assembly. It bonds well to a wide range of substrates with minimal pre-treatment.

Sikaflex®-554 can be accelerated with Sika's Booster and PowerCure systems.

PRODUCT BENEFITS

- Good adhesion to a wide variety of substrates without primer
- Very good weathering resistance
- Passes DIN EN 45545-2 R1/R7 HL3
- ISEGA certificate for foodstuff area usage
- Curing can be accelerated with Sika Booster and Sika PowerCure
- Solvent-, isocyanate-, phthalate- and PVC-free
- Capable of withstanding dynamic stresses

AREAS OF APPLICATION

Sikaflex®-554 is suitable for joints that will be subjected to dynamic stresses. Suitable substrate materials are metals, particularly aluminum, metal primers, paint coatings, sheet steel, ceramic materials and certain plastics. It bonds well to a wide range of substrates with minimal pre-treatment.

Seek manufacturer's advice and perform tests on original substrates before using Sikaflex®-554 on materials prone to stress cracking.

Sikaflex®-554 is suitable for experienced professional users only. Tests with actual substrates and conditions have to be performed ensuring adhesion and material compatibility.

CURE MECHANISM

Sikaflex®-554 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).

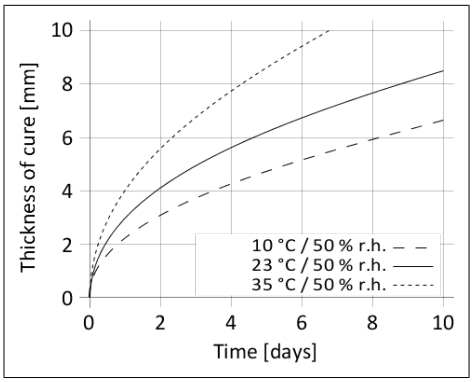

Diagram 1: Curing speed Sikaflex®-554

CHEMICAL RESISTANCE

Sikaflex®-554 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®-554 can be processed at temperatures (climate and product) between 5 °C and 40 °C (41 °F and 104 °F) 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 (59 °F and 77 °F).
Consider that the viscosity will increase at low temperature. For easy application, condition the adhesive at ambient temperature prior to use.

To ensure a uniform thickness of the bondline it is recommended to apply the adhesive in the form of a triangular bead (see figure 1).

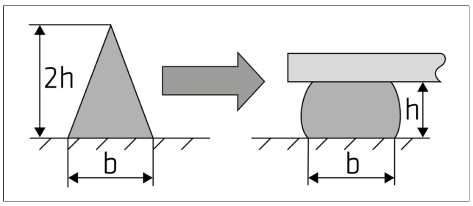

Figure 1: Recommended bead configuration

Sikaflex®-554 can be processed with manual, pneumatic or electric driven piston guns. 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.

Tooling and finishing

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

Removal

Uncured Sikaflex®-554 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 have to be washed immediately using a suitable industrial hand cleaner and water.
Do not use solvents on skin.

FURTHER INFORMATION

The information herein is offered for general guidance only. Advice on specific applications 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 and Sealing with 1-component Sikaflex®

PACKAGING INFORMATION

Unipack	600 ml
Cartridge	300 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.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

LEGAL DISCLAIMER

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