BUILDING TRUST

PRODUCT DATA SHEET

Sikaflex®-554 + SikaBooster® S-50

Accelerated STP adhesive for assembly bonding

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Chemical base		Silane Terminated Polymer
Color (CQP001-1)		White, black
Cure mechanism		Moisture-curing [A]
Density (uncured)	adhesive (depending on color)	1.44 kg/l
	SikaBooster® S-50	1.15 kg/l
Booster content	by volume	2.5 %
	by weight	2.0 %
Non-sag properties		Good
Application temperature	ambient	5 – 40 °C
Open time (CQP526-1)		20 minutes [B]
Early tensile lap-shear strength (CQP046-1 / ISO 4587)		see table 1
Shrinkage (CQP014-1)		2 %
Shore A hardness (CQP023-1 / ISO 48-4)		55
Tensile strength (CQP036-1 / ISO 527)		3.5 MPa
Elongation at break (CQP036-1 / ISO 527)		500 %
Tear propagation resistance (CQP045-1 / ISO 34)		20 N/mm
Tensile lap-shear strength (CQP046-1 / ISO 4587)		2.5 MPa
Service temperature (CQP513-1)		-50 – 90 °C
Shelf life (CQP016-1)	Sikaflex®-554 (pail / drum)	9 months [C]
	SikaBooster® S-50 unipack	12 months [C]
	SikaBooster® S-50 pail	18 months [C]
Mixer		Statomix MS 13/18 G

CQP = Corporate Quality Procedure [A] provided by SikaBooster® S-50 [B] 23 °C / 50 % r. h. [C] stored below 25 °C

DESCRIPTION

Sikaflex®-554 + SikaBooster® S-50 is an accelerated 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 pretreatment.

PRODUCT BENEFITS

- Good adhesion to a wide variety of substrates without primer
- Very good weathering resistance
- Passes DIN EN 45545-2 R1/R7 HL3
- Fast curing by Booster Technology
- Solvent-, isocyanate-, phthalate- and PVC-free
- Capable of withstanding dynamic stresses

AREAS OF APPLICATION

Sikaflex®-554 + SikaBooster® S-50 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 + SikaBooster® S-50 on materials prone to stress cracking.
This product 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 + SikaBooster® S-50 cures by reaction with the accelerator and largely independent from atmospheric moisture. For typical strength build up data at 23 °C see table below.

Time [h]	Lap-Shear Strength [MPa]
2	0.25
4	0.7
8	1.2
24	2

Table 1: Strength build-up Sikaflex®-554 + SikaBooster® S-50

CHEMICAL RESISTANCE

Sikaflex®-554 + SikaBooster® S-50 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.
All pre-treatment steps must be confirmed by preliminary tests on original substrates considering specific conditions in the assembly process.

Application

Sikaflex®-554 + SikaBooster® S-50 need to be processed with an adequate dispensing system. The mixer type needs to be respected (see table Typical Product Data).
Sikaflex®-554 + SikaBooster® S-50 can be applied 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.

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

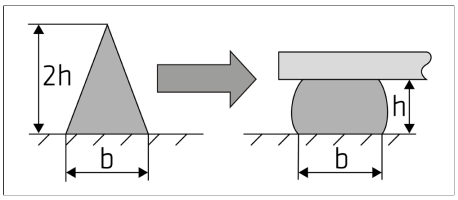

Figure 1: Recommended bead configuration

The open time is significantly shorter in hot and humid climate. The parts must always be joint within the open time. As a rule of thumb, a change of + 10 °C reduces the open time by half.
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 open time of the adhesive. We recommend the use of Sika® Tooling Agent N. Other finishing agents must be tested for suitability and compatibility.

Removal

Uncured Sikaflex®-554 + SikaBooster® S-50 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 hand wipes such as Sika® Cleaner-350H or 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
- General Guidelines
  Bonding and Sealing with 1-component Sikaflex®

PACKAGING INFORMATION

Sikaflex®-554

Pail	23 l
Drum	195 l

SikaBooster® S-50

Unipack	600 ml
Pail	23 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

Any information or suggestions for use concerning Sika's products, which we either in writing or orally have given buyers or end-users of the product, have been given in good faith based on our own experiences and based on approved praxis and the technological and scientific knowledge on the time of giving such suggestions and information, which are given without any type of guarantees, and which do not lead to any further responsibility from Sika Danmark A/S, besides what is stated in the sales agreement in question. The buyer or end-user should themselves investigate or otherwise make sure, that our products are suitable for the use in question and further make sure that the products are kept and used correct and in agreement with the published rules and considering the actual conditions in order to avoid damages or less satisfactory results. Any order is accepted and any deliverance is affected according to the general terms of sales and delivery from Sika Danmark A/S, which are considered known and accepted, and which could be handed out when asked for. Our catalogues are not up-dated automatically. The present product data sheet is only for use in Denmark. Values stated in the present product data sheet should be seen as recommended, unless stated otherwise.

Sika Danmark A/S
Hirsemarken 5
3520 Farum
Tlf. +45 48 18 85 85
www.sika.dk