

PRODUCT DATA SHEET

Sikaflex®-554 PowerCure

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)	depending on color 1.44 kg/l
Non-sag properties	Good
Application temperature	ambient 5 – 40 °C
Open time (CQP526-1)	20 minutes ^B
Shrinkage (CQP014-1)	2 %
Early tensile lap-shear strength (CQP046-1 / ISO 4587)	(see table 1)
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 (CQP509-1 / CQP513-1)	-50 – 90 °C
Shelf life	9 months ^C

CQP = Corporate Quality Procedure

^{A)} Provided by PowerCure^{B)} 23 °C / 50 % r. h.^{C)} stored below 25 °C**DESCRIPTION**

Sikaflex®-554 PowerCure is an accelerated elastic 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 PowerCure Technology
- Solvent-, isocyanate-, phthalate- and PVC-free
- Capable of withstanding dynamic stresses

AREAS OF APPLICATION

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

PRODUCT DATA SHEET

Sikaflex®-554 PowerCure
Version 04.01 (12 - 2023), en_DK
012201255540001010

CURE MECHANISM

Sikaflex®-554 PowerCure 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 PowerCure

CHEMICAL RESISTANCE

Sikaflex®-554 PowerCure 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

Setup the PowerCure Dispenser according the PowerCure User Manual. If the application is discontinued for more than 5 minutes, the mixer needs to be replaced.

Sikaflex®-554 PowerCure 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.

Consider that the viscosity will increase at low temperature.

For easy application, condition the adhesive at ambient temperature prior to use.

The open time is significantly shorter in hot and humid climate. The parts must always be installed within the open time.

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

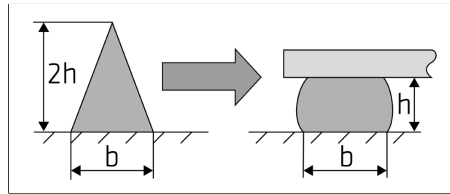


Figure 1: Recommended bead configuration

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 or lubricants must be tested for suitability and compatibility.

Removal

Uncured Sikaflex®-554 PowerCure 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
- Sika Pre-treatment Chart For Silane Terminated Polymers (STP)
- PowerCure User Manual and Quick Reference Guide
- General Guidelines Bonding and Sealing with 1-component Sikaflex®

PACKAGING INFORMATION

PowerCure Pack	600 ml 400 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

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.