

## 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
Colour (CQP001-1)	White, black
Cure mechanism	Moisture-curing <sup>A</sup>
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 <sup>B</sup>
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 (CQP016-1)	9 months <sup>C</sup>

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 aluminium, 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.

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Sikaflex®-554 PowerCure  
Version 03.01 (04 - 2022), en\_GB  
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

Set up 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 recommended to apply the adhesive in form of a triangular bead (see figure 1).

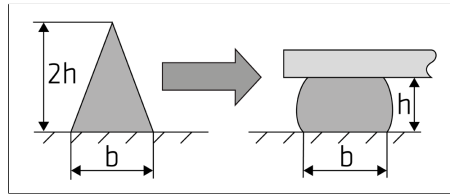


Figure 1: Recommended bead configuration

## 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
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## 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

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

## DISCLAIMER

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