

PRODUCT DATA SHEET

Sikaflex®-274 PowerCure

Accelerated low modulus assembly adhesive

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Chemical base	Polyurethane
Color (CQP001-1)	Black
Cure mechanism	Moisture-curing ^A
Density (uncured)	1.25 kg/l
Non-sag properties (CQP061-1)	Good
Application temperature	ambient 10 – 35 °C
Open time (CQP526-1)	5 minutes ^B
Early tensile lap-shear strength (CQP046-1 / ISO 4587)	see table 1
Shrinkage (CQP014-1)	1 %
Shore A hardness (CQP023-1 / ISO 48-4)	45
Tensile strength (CQP036-1 / ISO 527)	3 MPa
Elongation at break (CQP036-1 / ISO 527)	400 %
Tear propagation resistance (CQP045-1 / ISO 34)	7 N/mm
Tensile lap-shear strength (CQP046-1 / ISO 4587)	2 MPa
Service temperature (CQP509-1 / CQP513-1)	-40 – 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®-274 PowerCure is an accelerated low modulus polyurethane adhesive system for assembly applications. The curing of Sikaflex®-274 PowerCure is accelerated by SikaBooster® technology which makes it largely independent of atmospheric conditions.

The low modulus allows bonding of components with large thermal elongation differency. It is made for Sika's PowerCure System and is applied using the PowerCure Dispenser.

PRODUCT BENEFITS

- 1-component formulation with accelerated cure
- Ratio between open time and accelerated curing allows use on the assembly line
- Low modulus
- Capable of withstanding high dynamic stresses
- Solvent free

AREAS OF APPLICATION

Sikaflex®-274 PowerCure is suitable for assembly joints which are exposed to dynamic stresses and where the attainment of high early strength is essential.

Due to its low modulus it is also suitable to bond large components and assemblies with different thermal elongation, e.g. plastics to e-coated steel.

Seek manufacturer's advice and perform tests on original substrates before using this product 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.

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Sikaflex®-274 PowerCure
Version 04.03 (05 - 2023), en_DEAUTO
012001252740001000

CURE MECHANISM

Sikaflex®-274 PowerCure cures by reaction with moisture provided by the accelerator paste and largely independent from atmospheric moisture. For typical strength build up data see table below.

Time [min]	Lap-Shear Strength [MPa]
20	0.2
30	0.6
40	1.2
60	1.8

Table 1: Strength build-up at 23 °C

CHEMICAL RESISTANCE

Sikaflex®-274 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 and dust.

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 to the PowerCure User Manual. If the application is discontinued for more than 2 minutes, the mixer needs to be replaced.

Sikaflex®-274 PowerCure can be applied between 10 °C and 35 °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).

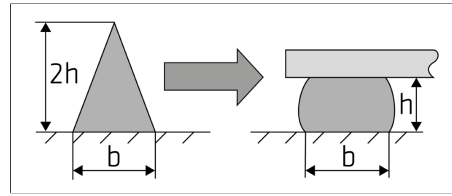


Figure 1: Recommended bead configuration

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

Removal

Uncured Sikaflex®-274 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 cleaning towels 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®
- PowerCure Dispenser
Operating Instructions and Quick Reference Guide

PACKAGING INFORMATION

PowerCure Pack	600 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

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

The information, and, in particular, the recommendations relating to the application and enduse of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.