BUILDING TRUST

PRODUCT DATA SHEET

Sikaflex®-271 PowerCure

Accelerated glazing adhesive

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Chemical base	Polyurethane
Color (CQP001-1)	Black
Cure mechanism	Moisture-curing [A]
Density (uncured)	1.20 kg/l (10.0 lb/gal)
Non-sag properties (CQP061-1)	Very good
Application temperature	5 – 40 °C (41 – 104 °F)
Open time (CQP526-1)	10 minutes [B]
Early tensile lap-shear strength (CQP046-1 / ISO 4587)	See table 1
Shore A hardness (CQP023-1 / ISO 48-4)	65
Tensile strength (CQP036-1 / ISO 527)	7 MPa (1000 psi)
Elongation at break (CQP036-1 / ISO 527)	300 %
Tear propagation resistance (CQP045-1 / ISO 34)	10 N/mm (55 pli)
Tensile lap-shear strength (CQP046-1 / ISO 4587)	5 MPa (720 psi)
Service temperature (CQP509-1 / CQP513-1)	-40 – 90 °C (-40 – 194 °F)
Shelf life	9 months

CQP = Corporate Quality Procedure [A] Provided by PowerCure [B] 23 °C (73 °F) / 50 % r.h.

DESCRIPTION

Sikaflex®-271 PowerCure is an accelerated elastic polyurethane adhesive for glazing and vehicle-glass-replacement applications. Suitable for bonding materials relevant for direct glazing such as paints, glass, ceramic frits, painted and e-coated surfaces in commercial-vehicle production and repair.

Curing of Sikaflex®-271 PowerCure is accelerated by Sika's PowerCure technology which makes it largely independent of atmospheric conditions.

PRODUCT BENEFITS

- Accelerated curing and adhesion build-up
- Excellent application properties
- Ideal for glass replacement in commercial vehicles
- Low climate dependency of the curing speed with Sika® Booster
- High mechanical strength
- Solvent-free

AREAS OF APPLICATION

Sikaflex®-271 PowerCure is designed especially for manual direct-glazing application and vehicle-glass replacement in commercial vehicles. Thanks to the PowerCure Technology Sikaflex®-271 PowerCure exhibits a fast strength and adhesion build-up.

This product is suitable for experienced professional users only. Test with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.

CURE MECHANISM

Sikaflex®-271 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 [h]	Tensile lap-shear strength at 23 °C (73 °F) [MPa]
1	0.7 (100 psi)
2	3.5 (510 psi)

Table 1: Strength build-up of Sikaflex®-271 PowerCure

CHEMICAL RESISTANCE

Sikaflex®-271 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 pretreatment 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®-271 PowerCure can be processed between 5 °C and 40 °C (41 °F and 104 °F) but changes in reactivity as well as application properties need to be considered. The optimum temperature for substrate and adhesive is between 15 °C and 25 °C (59 °F and 77 °F).

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 (+ 18 °F) reduces the open time by half.

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

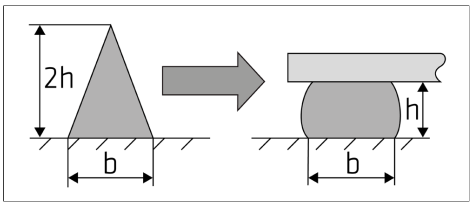

Figure 1: Recommended bead configuration

Removal

Uncured Sikaflex®-271 PowerCure can 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
- General Guidelines
  Bonding and Sealing with 1-component Sikaflex®
- PowerCure User Manual
- PowerCure Quick Reference Guide

PACKAGING INFORMATION

PowerCure Pack	600 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.

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