

PRODUCT DATA SHEET

Sikaflex®-223

WEATHERING-RESISTANT LOW-MODULUS ADHESIVE SEALANT

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Chemical base	1-component polyurethane
Colour (CQP001-1)	Black, white
Cure mechanism	Moisture-curing
Density (uncured)	depending on colour 1.2 kg/l
Non-sag properties	Good
Application temperature	ambient 10 – 35 °C
Skin time (CQP019-1)	50 minutes ^A
Open time (CQP526-1)	35 minutes ^A
Curing speed (CQP049-1)	(see diagram)
Shrinkage (CQP014-1)	1 %
Shore A hardness (CQP023-1 / ISO 7619-1)	30
Tensile strength (CQP036-1 / ISO 527)	2 MPa
Elongation at break (CQP036-1 / ISO 527)	400 %
Tear propagation resistance (CQP045-1 / ISO 34)	5.5 N/mm
Service temperature (CQP509-1 / CQP513-1)	-50 – 90 °C
Shelf life (CQP016-1)	12 months ^B

CQP = Corporate Quality Procedure

^{A)} 23 °C / 50 % r. h.^{B)} storage below 25 °C**DESCRIPTION**

Sikaflex®-223 is a multi-purpose 1-component polyurethane adhesive and sealant suitable for interior and exterior application. It adheres well to most common substrates such as metals, GRP, 2-C coating and paint systems, plastics. Its excellent weathering resistance makes it suitable for exposed open joints. Its low modulus allows the use of Sikaflex®-223 to bond and seal organic glasses (PC, PMMA).

PRODUCT BENEFITS

- Good ageing and weathering resistance
- Easy to process and tool
- Suitable for a wide variety of organic glasses
- Short cut-off string

AREAS OF APPLICATION

Sikaflex®-223 is a multi-purpose adhesive and sealant suitable for industrial sealing and bonding application on most common substrates such as metals, GRP, 2-component coating and paint systems, and plastics. Its excellent weathering resistance makes it suitable for exposed open joints. Its low modulus allows the use of Sikaflex®-223 to bond and seal organic glasses (PC, PMMA).

Seek manufacturer's advice and perform tests on original substrates before using Sikaflex®-223 on materials prone to stress cracking. Sikaflex®-223 is suitable for experienced professional users only. Tests with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.

CURE MECHANISM

Sikaflex®-223 cures by reaction with atmospheric moisture. At low temperatures the water content of the air is generally lower and the curing reaction proceeds somewhat slower (see diagram 1).

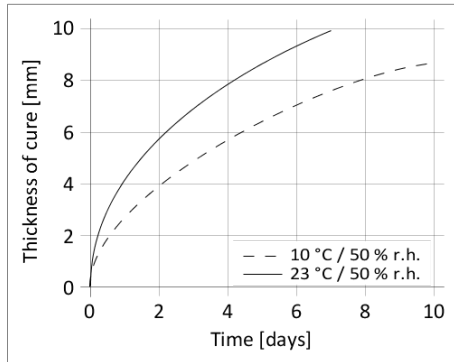


Diagram 1: Curing speed Sikaflex®-223

CHEMICAL RESISTANCE

Sikaflex®-223 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. The above information is offered for general guidance only. Advice on specific applications will be given on request.

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. Suggestions for surface preparation may be found on the current edition of the appropriate Sika® Pre-treatment Chart. Consider that these suggestions are based on experience and have in any case to be verified by tests on original substrates.

Application

Sikaflex®-223 can be processed 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. Consider that the viscosity will increase at a lower temperature. For easy application, condition the adhesive at ambient temperature prior to use. To ensure a uniform thickness of the bondline it is recommended to apply the adhesive in form of a triangular bead (see figure 1).

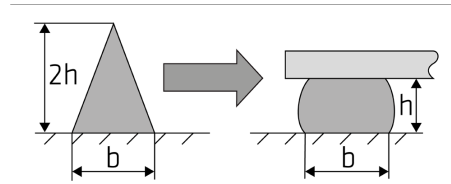


Figure 1: Recommended bead configuration

Sikaflex®-223 can be processed with manual, pneumatic or electric driven piston guns as well as pump equipment. The open time is significantly shorter in hot and humid climate. The parts must always be installed within the open time. Never join bonding parts if the adhesive has built a skin.

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 tack-free time of the adhesive. We recommend the use of Sika® Tooling Agent N. Other finishing agents or lubricants must be tested for suitability/ compatibility.

Removal

Uncured Sikaflex®-223 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 Sika® Cleaner-350H cleaning towels or a suitable industrial hand cleaner and water.

Do not use solvents on skin.

Overpainting

Sikaflex®-223 can be painted after formation of a skin. If the paint requires a baking process, best performance is achieved by allowing the sealant to fully cure first. All paints have to be tested by carrying preliminary trials under manufacturing conditions. The elasticity of paints is usually lower than that of sealants. This could lead to cracking of the paint film in the joint area.

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 1-component Polyurethanes
- General Guidelines Bonding and Sealing with 1-component Sikaflex®

PACKAGING INFORMATION

Cartridge	300 ml
Unipack	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.

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 end-use 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.

PRODUCT DATA SHEET

Sikaflex®-223
Version 04.01 (11 - 2019), en_GB
012001212230001000

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