

PRODUCT DATA SHEET

Sikaflex®-221

Multi-purpose adhesive sealant with a wide adhesion range

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Chemical base		1-component polyurethane
Color (CQP001-1)		White, grey, black, brown
Cure mechanism		Moisture-curing
Density (uncured)	depending on color	1.3 kg/l
Non-sag properties		Good
Application temperature	ambient	5 – 40 °C
Skin time (CQP019-1)		60 minutes ^A
Open time (CQP526-1)		45 minutes ^A
Curing speed (CQP049-1)		(see diagram)
Shrinkage (CQP014-1)		5 %
Shore A hardness (CQP023-1 / ISO 48-4)		40
Tensile strength (CQP036-1 / ISO 527)		1.8 MPa
Elongation at break (CQP036-1 / ISO 527)		500 %
Tear propagation resistance (CQP045-1 / ISO 34)		7 N/mm
Service temperature (CQP513-1)	24 hours 1 hour	-50 – 90 °C 120 °C 140 °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®-221 is a multi-purpose 1-component polyurethane adhesive / sealant that bonds well to a wide variety of substrates like metals, metal primers and paint coatings (2-component systems), ceramic materials and plastics. It is suitable for making permanent elastic seals.

PRODUCT BENEFITS

- Bonds well to a wide variety of substrates
- Resistant to ageing
- Can be sanded and painted
- Passes EN45545-2 R1/R7 HL3
- Non-corrosive
- Low odor
- EPD

AREAS OF APPLICATION

Sikaflex®-221 bonds well to a wide variety of substrates and is suitable for making permanent elastic seals. Suitable substrate materials are metals, metal primers and paint coatings (2-component systems), ceramic materials and plastics. It is ideally used for internal sealing and simple bonding applications. Seek manufacturer's advice and perform tests on original substrates before using Sikaflex®-221 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.

CURE MECHANISM

Sikaflex®-221 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).

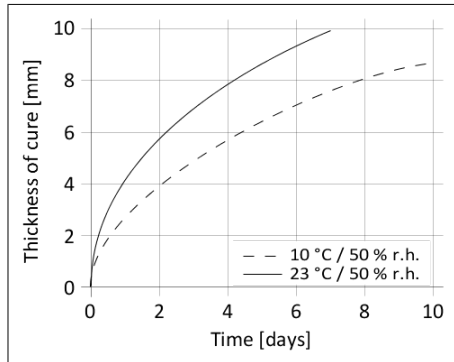


Diagram 1: Curing speed for Sikaflex®-221

CHEMICAL RESISTANCE

Sikaflex®-221 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. 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®-221 can be processed between 5 °C and 40 °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.

Sikaflex®-221 can be processed with hand, pneumatic or electric driven piston guns as well as pump equipment.

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 skin time of the sealant. It is recommended using Sika® Tooling Agent N. Other finishing agents must be tested for suitability and compatibility prior the use.

Removal

Uncured Sikaflex®-221 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 hand wipes such as Sika® Cleaner-350H or a suitable industrial hand cleaner and water.

Do not use solvents on skin.

Overpainting

Sikaflex®-221 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. 1C-PUR and 2C-acrylic based paints are usually suitable. 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 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	400 ml 600 ml
Pail	23 l
Drum	195 l

Please contact our customer service, for information of what packaging sizes are sold in Denmark.

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.

PRODUCT DATA SHEET

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