

Sikaflex®-221

One-component adhesive sealant

Technical Product Data

Chemical base	1-component polyurethane
Colour (CQP ¹⁾ 001-1)	White, grey, black
Cure mechanism	Moisture-curing
Density (uncured) (CQP006-4)	1.3 kg/l approx. depending on color
Non-sag properties	Good
Application temperature	5°C - 40°C
Tack free time ²⁾ (CQP019-1)	60 min. approx.
Open time ²⁾ (CQP526-1)	45 min. approx.
Curing speed (CQP049-1)	(see diagram)
Shrinkage (CQP014-1)	5% approx.
Shore A-hardness (CQP023-1 / ISO 868)	40 approx.
Tensile strength (CQP036-1 / ISO 37)	1,8 N/mm ² approx
Elongation at break (CQP036-1 / ISO 37)	500% approx.
Tear propagation resistance (CQP045-1/ ISO 34)	6 N/mm approx
Glass transition temperature (CQP509 -1/ ISO 4663)	-45°C approx.
Movement accommodation factor	12.5%
Service temperature (CQP513-1)	permanent -40°C to +90°C
Short term	1 day 120°C 1 hour 140°C
Shelf life (storage below 25°C) (CQP016-1)	12 months

¹⁾ CQP = Corporate Quality Procedure ²⁾ 23°C / 50% r.h.

Description

Sikaflex®-221 is a high-quality multi purpose non-sag 1-component polyurethane sealant that cures on exposure to atmospheric humidity to form a durable elastomer. For US: Meets approvals ASTM C920 types and Federal Specifications TT-S-00230C.

Sikaflex®-221 is manufactured in accordance with ISO 9001 / 14001, quality assurance system and with the responsible care program.

Product Benefits

- 1-component formulation
- Elastic
- Low odour
- Resistant to ageing and weathering exposure
- Non-corrosive
- Can be overpainted
- Can be sanded
- Bonds well to a wide variety of substrates
- NSF-approved for incidental food contact.

Areas of Application

Sikaflex®-221 bonds well to a wide variety of substrates and is suitable for making permanent elastic seals of high adhesive strength. Suitable substrate materials include timber; metals, metal primers and paint coatings (2-component systems), ceramic materials and plastics. Seek manufacturer's advice before using on transparent and pigmented materials that are prone to stress cracking.



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)

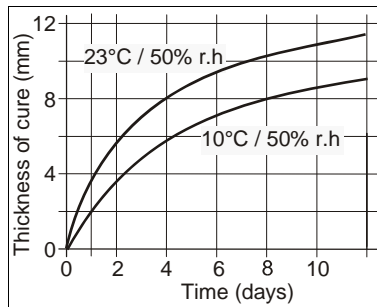


Diagram 1: Curing speed for Sikaflex®-221

Chemical Resistance

Sikaflex®-221 is resistant to fresh water, seawater, limewater, sewage effluent, diluted acids and caustic solutions; temporarily resistant to fuels, mineral oils, vegetable and animal fats and oils; not resistant to organic acids, 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 all traces of grease, oil and dust. As a rule, the substrates must be prepared in accordance with the instructions given in the current Sika Primer Chart.

Advice on specific applications is available from Sika's Technical Service Department.

Application

Cartridges: Pierce cartridge membrane.

Unipacs: Place unipac in the application gun and snip off the closure clip.

Cut off the tip of the nozzle to suit joint width and apply the sealant into the joint with a suitable hand operated or compressed-air gun, taking care to avoid air entrapment. Once opened, packs should be used up within a relatively short time.

Do not apply at temperatures below 5°C or above 40°C. The optimum temperature for substrate and sealant is between 15°C and 25°C.

Tooling and finishing

Tooling and finishing must be carried out within the tack-free time of the sealant. Finishing agents or lubricants must be tested for suitability / com-patibility

Removal

Uncured Sikaflex®-221 can be removed from tools and equipment with Sika® Remover-208. Once cured, the material can only be removed mechanically.

Hands and exposed skin should be washed immediately using a suitable industrial hand cleaner and water. Do not use solvents!

Overpainting

Sikaflex®-221 can be overpainted when tack-free.

The paint must be tested for compatibility by carrying out preliminary trials. Sikaflex®-221 should not be exposed to baking temperatures until it has attained full cure. It should be understood that the hardness and film thickness of the paint may impair the elasticity of the sealant and lead to cracking of the paint film.

Further Information

Copies of the following publications are available on request:

- Material Safety Data Sheet
- Sika Primer Chart

Packaging Information

Cartridge	310 ml
Unipac	600 ml

Important

For information and advice regarding transportation, handling, storage and disposal of chemical products, users should refer to the actual Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

Note

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 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 proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users should always refer to the most recent issue of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.

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