Industry

Sikaflex®-521 UV

Excellent adherent, weathering resistant sealant

Technical Product Data

Chemical base		Silane Terminated Polymer
Color (CQP[1] 001-1)		White, grey, black
Cure mechanism		Moisture-curing
Density (uncured) (CQP 006-4)	depending on color	1.4 kg/l approx.
Non-sag properties (CQP 061-1)		Good
Application temperature	ambient	5 - 40°C (40 - 105°F)
Tack free time[2] (CQP 019-1)		30 min. approx.
Curing speed (CQP 049-1)		(see diagram)
Shrinkage (CQP 014-1)		2% approx.
Shore A-hardness (CQP 023-1 / ISO 868)		40 approx.
Tensile strength (CQP 036-1 / ISO 37)		1.8 N/mm^2 approx.
Elongation at break (CQP 036-1 / ISO 37)		400% approx.
Tear propagation resistance (CQP 045-1 / ISO 34)		5.5 N/mm approx.
Glass transition temperature (CQP 509-1 / ISO 4663)		-50°C (-60°F) approx.
Volume resistivity (CQP 079-2 / ASTM D 257-99)		10^{10} Ω cm approx.
Service Temperature (CQP 513-1) Short Term	 4 hours 1 hour	-40 - 90°C° (-40 - 195°F) 140°C (285°F) 150°C (300°F)
Shelf life (storage below 25°C) (CQP 016-1)	cartridge / unipack pail / drum	12 months 9 months

[1] CQP = Corporate Quality Procedures [2] 23°C (73°F) / 50% r.h.

Description

Sikaflex®-521 UV is a one-component PUR-Hybrid sealant based on the Sika Silane Terminated Polymer (STP) technology. The product cures on exposure to atmospheric humidity to form a durable elastomer.
Sikaflex®-521 UV is manufactured in accordance with ISO 9001 / 14001 quality assurance system and with the responsible care program.

Product Benefits

- Ageing and weathering resistant
- Bonds well to a wide variety of substrates without the need for special pre-treatment
- Elastic
- Can be overpainted
- Can be sanded
- Low odor
- Non-corrosive
- High electrical resistance
- Isocyanate- and solvent-free
- Silicone- and PVC-free

Areas of Application

Sikaflex®-521 UV adheres well to a wide variety of substrates and is suitable for elastic sealing and bonding. Suitable substrate materials include timber, metals, metal primers and paint coatings (2-part systems), ceramic materials and plastics.
Seek manufacturer's advice before using on transparent materials that are prone to stress cracking.
This product is suitable for professional experienced users only. Tests with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.

Cure Mechanism

Sikaflex®-521 UV 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).
If Sikaflex®-521 UV is used in combination with a PUR adhesive, the latter must be fully cured before seam sealing with Sikaflex®-521 UV.

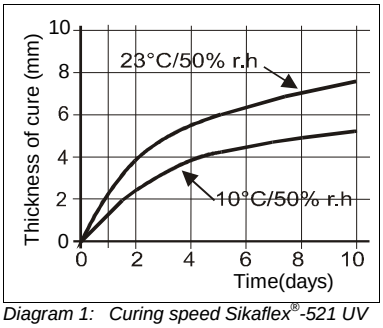

Diagram 1: Curing speed Sikaflex®-521 UV

Chemical Resistance

Sikaflex®-521 UV is resistant to fresh water, seawater and proprietary aqueous cleaning agents; temporarily resistant to fuels, mineral oils, vegetable and animal fats and oils; not resistant to organic acids, concentrated mineral acids, 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

The surfaces must be clean, dry and free from grease, oil, and dust. The adhesion of the sealant can be improved by wiping the joint faces with Sika® Aktivator-205 or possibly applying the appropriate Sika® Primer.
Directions for the preparation and treatment of different substrates are given in the appropriate Sika Pre-treatment Chart.
Advice on specific applications is available from the Technical Department of Sika Industry.

Application

Cut off the tip of the nozzle to give desired sealant bead geometry. For satisfactory results the sealant must be applied with a hand-operated cartridge gun, piston type compressed-air gun or pump operated bulk dispensing equipment.
The optimum temperature for substrate and sealant is between 15°C and 25°C.
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 sealant. We recommend the use of Sika® Tooling Agent N. Other products must be tested for suitability/compatibility prior to use.

Removal

Uncured Sikaflex®-521 UV 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 should be washed immediately using Sika® Handclean Towel or a suitable industrial hand cleaner and water. Do not use solvents!

Overpainting

Sikaflex®-521 UV can be overpainted within the skin formation time. 2 component epoxy paints are usually suitable. Other paints must be tested for compatibility by carrying out preliminary trials under manufacturing conditions. The elasticity of paints is lower than of polyurethanes. This could lead to cracking of the paint film in the joint area.

Further Information

Copies of the following publications are available on request:
- Safety Data Sheets
- Sika® Pre-treatment Chart for Polyurethane Hybrids
- General Guidelines for Bonding and Sealing with Sikaflex®

Packaging Information

Cartridge	300 ml
Unipack	600 ml
Pail (on request)	23 l
Drum (on request)	195 l

Value Bases

All technical data stated in this Product Data Sheet 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.

Legal Notes

Further information available at:
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www.sika.ch

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