

Sikaflex®-521 UV

Weathering Resistant Sealant

Technical Product Data (Typical Values) *Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

Chemical base	One-part Silane Terminated Polyurethane Hybrid	
Color	White/Gray	
Cure mechanism	Moisture-curing	
Density (uncured)	11.6 lb/gal	
Non-sag properties	Good	
Application temperature	40° - 105°F (5° - 40°C)	
Tack free time ¹ (CQP 019-1)	30 min	
Curing speed (CQP 049-1)	(see diagram 1)	
Shrinkage (CQP 014-1)	2.0%	
Shore A-hardness (CQP 023-1 / ASTM D2240)	40	
Tensile strength (CQP 036-1 / ASTM D412)	260 psi	
Elongation at break (CQP 036-1 / ASTM D 412)	400%	
Tear propagation resistance (CQP 045-1 / ASTM D 624)	31 pli	
Glass transition temperature (CQP 509-1 / ISO 4663)	-60°F (-50°C)	
Electrical Resistance (CQP 079-2 / ASTM D 257-99)	10 ¹⁰ Ωcm	
Service Temperature	-40° to 195°F (-40° to 90°C)	
Thermal Resistance	4 hours 1 hour	285°F (140°C) 300°F (150°C)
Shelf life (storage below 73°F (23°C))	Unipac & Cartridge Drum / pail	12 months 9 months

¹⁾ 73°F (23°C) / 50% r.h.

Description

Sikaflex®-521 UV is a multi-purpose, weathering resistant, non-sag, elastic, one-part silane-terminated polyurethane hybrid sealant, which cures on exposure to atmospheric moisture to form a durable elastomer. Sikaflex®-521 UV is isocyanate free and contains no added solvents. Sikaflex®-521 UV is manufactured in accordance with ISO 9001 / 14001 quality assurance system and the responsible care program.

Product Benefits

- 1-C hybrid formulation
- Elastic
- Ageing and weathering resistant
- Bonds well to a wide variety of substrates without the need for special pre-treatment
- Can be overpainted
- Can be sanded
- Low odor
- Non-corrosive
- High electrical resistance
- Low VOC and no added solvents
- Silicone- and PVC-free

Areas of Application

Sikaflex®-521 UV bonds well to a wide variety of substrates and is suitable for making permanent, high strength elastic seals. Compatible substrate materials include wood, metals, metal primers and paint coatings (two-part systems), ceramic materials, and plastics. Seek manufacturer's advice before using on transparent materials that are prone to stress cracking.



Cure Mechanism

Sikaflex®-521 UV cures by reaction with atmospheric humidity. At low temperatures the water content of the air is lower and the curing reaction proceeds a little more slowly. 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.

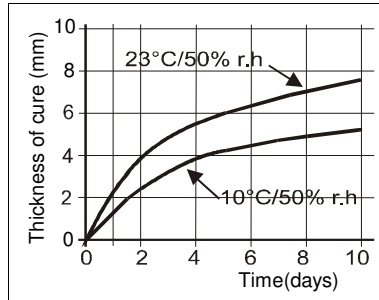


Diagram 1: Curing speed Sikaflex®521 UV

Chemical Resistance

Sikaflex®-521 UV is resistant to UV radiation, 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 all traces of grease, oil, wax and dust. The adhesion of the sealant can be improved by wiping the joint with Sika® Aktivator 205 (a cleaning and activating agent) and possibly a Sika® primer. For reference only, general directions for the preparation and treatment of different substrates are given in the appropriate Sika Hybrids Primer Chart.

Application

To ensure satisfactory conditions for curing, do not apply at temperatures below 40°F (5°C) or above 105°F (40°C). The optimum temperature for substrate and sealant is between 60°F (15°C) and 75°F (25°C).

Tooling and finishing

Tooling and finishing must be carried out within the tack-free time of the sealant. We recommend a dilute solution of mild, neutral pH soap. All 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 other suitable solvent such as mineral spirits. Once cured, the material can only be removed mechanically. Follow solvent manufacturer's instructions for use and warnings. Once cured, the material can only be removed mechanically. Hands and exposed skin should be washed immediately using a suitable industrial hand cleanser and water. Do not use solvents on skin!

Overpainting

Sikaflex®-521 UV can be over-painted within the tack-free time; paint and paint process must be tested for compatibility by carrying out preliminary trials. 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.

Limitations

Avoid applications below 40°F (5°C) and above 105°F (40°C) as improper surface properties could result. Since the material is

moisture cured, provide sufficient exposure to air. Do not apply over cured silicones or in the presence of curing silicones or urethanes. Avoid contact with excessive amounts of alcohols or alcohol-containing mixtures, as some temporary initial surface tackiness may result. Not designed for direct glazing applications.

CAUTION: IRRITANT. Contains 1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich (CAS:68515-49-1) and titanium dioxide (CAS:13463-67-7). May cause eye/ skin/ respiratory tract irritation. May cause gastrointestinal disturbance if swallowed. Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage. **Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal.**

WARNING! This product contains a chemical known in the State of California to cause cancer and birth defects or other reproductive harm.

HMIS

Health	*1
Flammability	1
Reactivity	0
Personal Protection	B

First Aid Measures

Eyes - Hold eyelids apart and flush thoroughly with tepid water for 15 minutes. **Skin** - Remove contaminated clothing. Wash skin thoroughly for 15 minutes with soap and tepid water. **Inhalation** - Remove to fresh air. **Ingestion** - Do not induce vomiting. Contact physician. **In all cases contact a physician immediately if symptoms persist.**

**KEEP OUT OF REACH OF CHILDREN
NOT FOR INTERNAL CONSUMPTION
FOR INDUSTRIAL USE ONLY
KEEP CONTAINER TIGHTLY
FOR PROFESSIONAL USE ONLY**

Packaging Information

Cartridge	10.1 fl. oz.
Unipac	20.0 fl. oz.

HANDLING AND STORAGE

Store product in closed container in cool dry place (below 77°F, 25°C) when not in use. Protect from frost and humidity. Avoid direct contact. Wear personal protective equipment (chemical resistant goggles/ gloves/ clothing) to prevent direct contact with skin and eyes. Use only in well ventilated areas. Open doors and windows during use. Use a properly fitted NIOSH respirator if ventilation is poor. Wash thoroughly with soap and water after use. Remove contaminated clothing and launder before reuse.

CLEAN UP

Use personal protective equipment (chemical resistant gloves/ goggles /clothing). Without direct contact, sweep up spilled or excess product and place in suitable sealed container. Dispose of excess product and container in accordance with applicable local, state, and federal regulations.

IMPLIED OR EXPRESS SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.

