

PRODUCT DATA SHEET

Sikaflex®-503 WR

WEATHERING-RESISTANT SEALANT WITH WIDE ADHESION RANGE

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Chemical base	Silane Terminated Polymer
Color (CQP001-1)	Black
Cure mechanism	Moisture-curing
Density (uncured)	1.65 kg/l approx.
Non-sag properties	Good
Application temperature	ambient 5 - 45°C (40 - 105°F)
Skin time (CQP019-1)	30 Approx. ^A
Curing speed (CQP049-1)	(see diagram)
Shore A hardness (CQP023-1 / ISO 48-4)	40 Approx.
Tensile strength (CQP036-1 / ISO 527)	1 N/mm ²
Elongation at break (CQP036-1 / ISO 527)	300%
Tear propagation resistance (CQP045-1 / ISO 34)	8 N/mm
Service temperature (CQP513-1)	-50 - 90°C°
Shelf life	12 months ^B

CQP = Corporate Quality Procedures

^A) 23°C (73°F) / 50% r.h.^B) Stored Below 25°C

DESCRIPTION

Sikaflex®-503 WR is a one component Silane Terminated Polymer (STP) technology. The product cures on exposure to atmospheric humidity to form a durable elastomer. Sikaflex®-503 WR 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.
- Easy to Process & Tool.
- Low odor.
- Isocyanate and solvent free.
- Silicone and PVC free.

AREAS OF APPLICATION

Sikaflex®-503 WR 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®-503 WR 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®-503 WR is used in combination with a polyurethane (PUR) based adhesive, Sikaflex®-503 WR should only be applied after sufficient skin formation of the PUR adhesive. Please refer to the curing speed chart of PUR adhesive for further information.

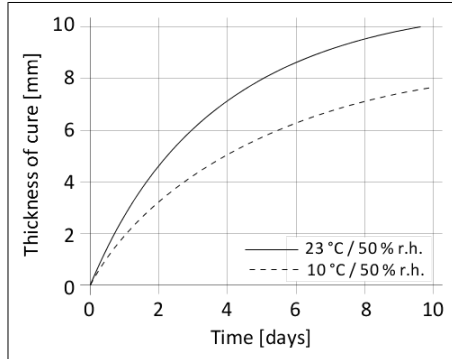


Diagram 1: Curing speed of Sikaflex®-503 WR

CHEMICAL RESISTANCE

Sikaflex®-503 WR 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®Cleaner-011 (formerly Sika®Cleaner P IN). 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®-503 WR 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®-503 WR 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 usually lower than that of sealants. This could lead to cracking of the paint in the joint area. Alkyd-based and acid-curing paints are not suitable.

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

Unipack	600 ml
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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.

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DISCLAIMER

The information, and in particular, the recommendations relating to the application and enduse 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

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