

Sikaflex®-552

Assembly adhesive with reduced substrate preparation

Technical Product Data

Chemical base		Silane Terminated Polymer
Colour (CQP ¹ 001-1)	depending on colour	White, black
Cure mechanism		Moisture-curing
Density (uncured) (CQP 006-4)		1.45 kg/l approx.
Non-sag properties		Good
Application temperature	ambient	5 - 40°C (40 - 105°F)
Skin time ² (CQP 019-1)		40 min. approx.
Curing speed (CQP 049-1)		see diagram 1
Shrinkage (CQP 014-1)		2% approx.
Shore A hardness (CQP 023-1 / ISO 868)		50 approx.
Tensile strength (CQP 036-1 / ISO 37)		3 N/mm ² approx.
Elongation at break (CQP 036-1 / ISO 37)		300% approx.
Tear propagation resistance (CQP 045-1 / ISO 34)		10 N/mm approx.
Tensile lap-shear strength (CQP 046-1 / ISO 4587)		2 N/mm ² approx.
Glass transition temperature (CQP 509-1 / ISO 4663)		-50°C (-60°F) approx.
Volume resistivity (CQP 079-2 / ASTM D 257-99)		3 x 10 ¹¹ Ωcm approx.
Temperature resistance (CQP 513-1)		90°C (195°F)
Short term	4 hours 1 hour	140°C (285°F) 150°C (300°F)
Service temperature range		-40 - 90°C (-40 - 195°F)
Shelf life (CQP 016-1) (storage below 25°C)	cartridge / unipack drum / pail	12 months 9 months

¹⁾ CQP = Corporate Quality Procedure

²⁾ 23°C (73°F) / 50% r.h.

Description

Sikaflex®-552 is a high-performance elastic gap-filling PUR-Hybrid adhesive based on the Sika Silane Terminated Polymer (STP) technology. Sikaflex-552 cures on exposure to atmospheric humidity to form a durable elastomer.

Sikaflex®-552 is manufactured in accordance with ISO 9001 / 14001 quality assurance system and the responsible care program.

Product Benefits

- 1-C silane-terminated polymer based technology
- Ageing and weathering resistant
- Bonds well to a wide variety of substrates with practically no need for priming
- Capable of withstanding high dynamic stresses
- Can be over-painted
- Low odour
- Non-corrosive
- High electrical resistance
- Low VOC content and solvent-free
- Silicone- and PVC-free

Areas of Application

Sikaflex®-552 is suitable for structural joints that will be subjected to dynamic stresses. Suitable substrate materials are metals, particularly aluminium (including anodised components), sheet steel (including phosphated, chromated and zinc-plated components), ceramic materials and plastics.

Seek manufacturer's advice before using on plastics 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®-552 cures by reaction with atmospheric humidity. At low temperatures the water content of the air is generally lower and the curing reaction proceeds more slowly.

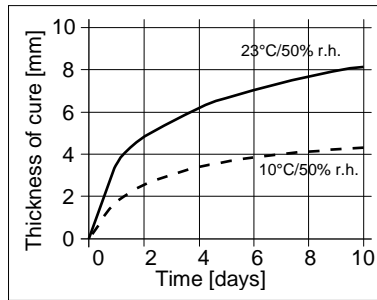


Diagram 1: Curing speed for Sikaflex®-552

Chemical Resistance

Sikaflex®-552 is resistant to fresh water, seawater, aqueous cleaning 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 grease, oil and dust. The adhesion of the adhesive can be improved by wiping the joint surfaces with Sika® Aktivator-205.

Advice on specific applications is available from the Technical Service Department of Sika Industry.

Application

Cut off the tip of the nozzle to give desired adhesive bead geometry. For satisfactory results the adhesive must be applied with a hand-operated cartridge gun, piston-type compressed-air gun or pump-operated bulk dispensing equipment. To ensure a uniform thickness of adhesive we recommend applying the adhesive in the form of a triangular bead (see figure 1).

The ideal temperature for substrate and sealant is between 15°C and 25°C.

For advice on selecting and setting up a suitable pump system please contact the System Engineering Department of Sika Industry.

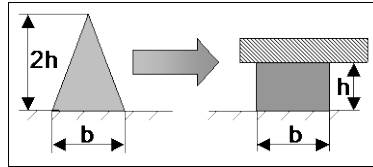


Figure 1: Recommended bead configuration

Removal

Uncured Sikaflex®-552 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®-552 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 elastomers. This could lead to cracking of the paint film in the joint area.

Further Information

Copies of the following publications are available on request:

- Material Safety Data Sheets
- General Guidelines - Bonding and Sealing with Sikaflex®

Packaging Information

Cartridge	300 ml
Unipack	400 / 600 ml
Pail	23 l
Drum	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 Material Safety Data Sheets containing physical, ecological, toxicological and other safety-related data.

Legal Notes

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 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.

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