

Sikaflex[®]-552 AT

High-performance assembly adhesive

Technical Product Data

Chemical base	Hybrid	
Colour (CQP ¹ 001-1)	White, black	
Cure mechanism	Humidity curing	
Density (uncured) (CQP 006-4)	1.45 kg/l approx.	
Non-sag properties	Good	
Application temperature	5 - 40°C (40 - 105°F)	
Skin time ² (CQP 019-1)	40 min. approx.	
Open time ² (CQP 526-1)	30 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)	3.0 N/mm ² approx.	
Elongation at break (CQP 036-1 / ISO 37)	300% approx.	
Tear propagation resistance (CQP 045-1 / ISO 34)	10.0 N/mm approx.	
Tensile lap-shear strength (CQP 046-1 / ISO 4587)	2.0 N/mm ² approx.	
Glass transition temperature (CQP 509-1 / ISO 4663)	-50°C (-75°F) approx.	
Electrical resistance (CQP 079-2 / ASTM D 257-99)	3 · 10 ¹¹ Ωcm approx.	
Thermal resistance (CQP 513-1)	4 hours 1 hour	140°C (285°F) 150°C (300°F)
Service temperature	-40 - 90°C (-40 - 195°F)	
Shelf life (storage below 25°C) (CQP 016-1)	cartridge / unipack	12 months

¹⁾ CQP = Corporate Quality Procedure

²⁾ 23°C (73°F) / 50% r.h.

Description

Sikaflex[®]-552 AT is a high-performance elastic gap-filling 1-component hybrid assembly adhesive for vehicle body trims that cures on exposure to atmospheric humidity to form a durable elastomer. Sikaflex[®]-552 AT is based on Sika's silane-terminated polymer technology and contains no isocyanate. Sikaflex[®]-552 AT is manufactured in accordance with ISO 9001 / 14001 quality assurance system and the responsible care program.

Product Benefits

- Advanced hybrid technology
- Good adhesion to a wide variety of substrates without primer
- Impact- and shock-proof
- Capable of withstanding high dynamic stresses
- High green strength
- Fast curing
- Ageing and weathering resistant
- Low odour
- Non-corrosive
- Solvent- and isocyanate-free
- Silicone- and PVC-free

Areas of Application

Sikaflex[®]-552 AT is suitable for joints that are subjected to high dynamic stresses. Sikaflex[®]-552 AT adheres well to all the materials commonly used in body shops, e.g. metal primers and paint coatings, metals, painted plastics 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.

Industry



Cure Mechanism

Sikaflex®-552 AT 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.

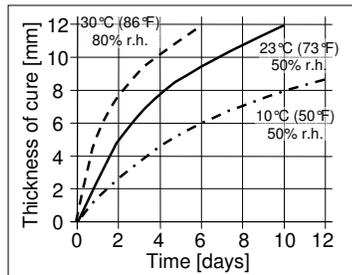


Diagram 1: Curing speed for Sikaflex®-552 AT

Chemical Resistance

Sikaflex®-552 AT is resistant to fresh water, seawater, and 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. Where appropriate, the adhesion of the adhesive can be improved by treating the substrate with Sika® Cleaner-205. As a general rule the substrates must be prepared in accordance with the instructions given in the current Sika® Pre-treatment Chart.

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

Application

Cartridges: Pierce cartridge membrane.

Unipacks: Place unipack 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 entrap-

ment. 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.

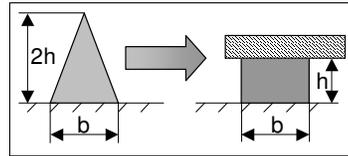


Figure 1: Recommended bead configuration

Tooling and finishing

Tooling and finishing must be carried out within the open time of the adhesive. We recommend the use of Sika® Tooling Agent N. Other finishing agents or lubricants must be tested for suitability and compatibility.

Removal

Uncured Sikaflex®-552 AT 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!

Over painting

Sikaflex®-552 AT can be over painted with most common car paint systems (including water based). Alkyd-based and acid-curing paints are unsuitable.

Over painting can be done wet-on-wet and up to 3 hours after application of Sikaflex®-552 AT. To achieve best material performance allow adhesive to cure prior to paint application and subsequent baking process. Adhesion on fully cured Sikaflex®-552 AT can be improved by treating the sealant with Sika® Cleaner-205 prior to painting.

It should be understood that the hardness and film thickness of the paint may impair the elasticity of the adhesive and lead to cracking of the paint film.

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	600 ml

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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