

Sikaflex®-553 2K

Two component assembly adhesive and sealant

Technical Product Data

Properties	Sikaflex®-553 2K A	Sikaflex®-553 2K B L15 / L30
Chemical base	2-component Hybrid	
Colour (CQP ¹ 001-1)	white	white
Density (CQP 006-4)	1.41 kg/l approx.	1.22 kg/l approx.
Density mixed	1.38 kg/l approx.	
Mixing ratio	A:B by volume	10:1
	A:B by weight	11.8:1
Non-sag properties (CQP061-1)	fair	
Application temperature	5 - 40°C (40 – 105°F)	
Skin time ² (CQP 019-1)	component B L15 / L30	30 min / 45 min approx.
Open time ² (CQP 526-1)	component B L15 / L30	15 min / 30 min approx.
Green strength (CQP 063-2)	See table 1	
Shrinkage (CQP 014-1)	< 2%	
Shore A hardness (CQP 023-1 / ISO 868)	45 approx.	
Tensile strength (CQP 036-1 / ISO 37)	2.6 MPa approx.	
Elongation at break (CQP 036-1 / ISO 37)	350% approx.	
Tear propagation resistance (CQP 045-1 / ISO 34)	8.0 N/mm approx.	
Tensile lap-shear strength (CQP 046-1 / ISO 4587)	2.0 MPa approx.	
Glass transition temperature (CQP 509-1 / ISO 4663)	-50°C (-60°F) approx.	
Thermal resistance (CQP 513-1)	1 hour	160°C (320°F)
Service temperature	-45 - 90°C (-50 - 194°F)	
Shelf life (CQP 016-1) (storage below 25°C)	cartridge drum/pail	6 months 6 months

¹⁾ CQP = Corporate Quality Procedure

²⁾ 23°C (73°F) / 50% r.h.

Description

Sikaflex®-553 2K is a two component hybrid adhesive / sealant with a good gap filling performance and pumpable over long distances. Sikaflex®-553 2K cures by chemical reaction of both components to form a durable elastomer.

Sikaflex®-553 2K is manufactured in accordance with ISO 9001 / 14001 quality assurance system and the responsible care program.

Product Benefits

- Pumpable over long distances
- Primerless adhesion to most common substrates
- Generally long working time combined with fast curing
- Different open time available
- Elastic
- Good gap filling capabilities
- Weathering and ageing resistant
- Low odour
- VOC and solvent free

Areas of Application

Sikaflex®-553 2K is suitable for large component bonding exposed to dynamic stress and where the attainment of high early strength is required. Common substrates are metals, particularly aluminum (incl. anodized), steel (incl. phosphated, chromated, zinc plated), metal primers and paint coatings (2-part systems), ceramic materials and plastics.

This product is suitable for professional experienced users only. Test with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.

Industry



Cure Mechanism

The curing of Sikaflex®-553 2K takes place by chemical reaction of the two components.

Time [h]	Strength [MPa] approx.	
	L15	L30
1	0.1	< 0.1
2	0.5	0.3
4	0.9	0.8

Table 1: Green strength (CQP 063-2) of Sikaflex®-553 2K at 23°C

Chemical Resistance

Sikaflex®-553 2K is resistant to fresh water, seawater, and aqueous cleaning solutions (neutral, chlorine free in common concentrations); 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. Additional surface treatment depends on the specific nature of the substrates and the manufacturer process. Therefore all recommendations must be determined by preliminary tests. Advice on specific applications is available from the Technical Service Department of Sika Industry.

Application

Sikaflex®-553 2K is dispensed from pails and drums by means of a pneumatic or hydraulic metering system or out of cartridges with an adequate hand gun. In order to achieve a proper mixing an 18 element mixer is required. The diameter of the mixer for pump applications is chosen based on the required output.

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

Do not apply at temperatures below 5°C or above 40°C. The optimum temperature for substrate and Sikaflex®-553 2K is between 15°C and 25°C.

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 of lubricates must be tested for suitability and compatibility.

Removal

Uncured Sikaflex®-553 2K 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®-553 2K can be over painted. All paints must be tested by carrying out preliminary trials under manufacturing conditions. The elasticity of paints is lower than polyurethane hybrids. This may 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® products

Packaging Information

Sikaflex®-553 2K A

Pail	23 l
Drum	195 l

Sikaflex®-553 2K B (L15 / L30)

Pail	23 l
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Sikaflex®-553 2K L15 / L30

Dual cartridge	490 ml
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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.

Further information available at:

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