Industry

Sikaflex®-254 + Sika® Booster

Fast-curing assembly adhesive

Technical Product Data

Properties		With Booster	Without Booster
Chemical base		Accelerated PUR	1-C polyurethane
Colour (CQP[1] 001-1)		Black, white	
Cure mechanism		Moisture-curing[2]	Moisture-curing
Density (uncured) (CQP 006-4)	depending on colour	1.25 kg/l approx.	
Booster content	by volume by weight	2.0% (1.8 – 2.2%) 1.8% (1.6 – 2.0 %)	
Non-sag properties		Good	
Application temperature	ambient	10 - 30°C (50 – 85°F)	
Skin time[3] (CQP 019-1)			45 min. approx.
Open time[3] (CQP 526-1)		20 min. approx.	
Green strength (CQP 063-2)		see diagram 1	
Curing speed (CQP 049-1)			3.5 mm in the 1st 24 h
Early tensile strength[3] (CQP 063-2) (time to reach 1 N/mm²)		5 h approx.	
Shrinkage (CQP 014-1)		1% approx.	
Shore A hardness (CQP 023-1 / ISO 868)		45 approx.	
Tensile strength (CQP 036-1 / ISO 37)		3 N/mm² approx.	
Elongation at break (CQP 036-1 / ISO 37)		400% approx.	
Tear propagation resistance (CQP 045-1 / ISO 34)		9 N/mm approx.	
Tensile lap-shear strength (CQP 046-1 / ISO 4587)		2.2 N/mm² approx.	
Volume resistivity (CQP 079-2 / ASTM D 257-99)		1 x 10^9 Ωcm approx.	
Service temperature (CQP 513-1) Short term	 4 hours 1 hour	-40 - 90°C (-40 - 195°F) 130°C (265°F) 150°C (300°F)	
Shelf life (CQP 016-1) (storage below 25°C)	unipack drum / pail	9 months 6 months	
Mixer	drum / pail	6 elements static mixer	

[1] CQP = Corporate Quality Procedure [2] Moisture provided by Sika® Booster Paste [3] 23°C (73°F) / 50% r.h.

Description

Sikaflex®-254 is a pasty, non-sag 1-component elastic adhesive based on humidity-curing polyurethane technology. When used in conjunction with Sika® Booster Paste its curing becomes largely independent from atmospheric conditions.
Sikaflex®-254 is manufactured in accordance with ISO 9001 / 14001 quality assurance system and the responsible care program.

Product Benefits

- 1-C formulation with accelerated cure
- Adequate working time to complete assembly, despite rapid cure
- Elastic / good gap-filling capabilities
- Capable of withstanding high dynamic stresses
- Sandable and overpaintable
- Solvent free and very low VOC

Areas of Application

Sikaflex®-254 Booster is suitable for assembly joints which are exposed to dynamic stresses and where the attainment of high early strength is essential. Sikaflex®-254 Booster is ideal to bond large components and assemblies.
This product is suitable for experienced professional users only. Test with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.

Cure Mechanism

Sikaflex®-254 cures by reaction with atmospheric moisture. If used in conjunction with Sika® Booster Paste the product cures largely independent from atmospheric moisture.

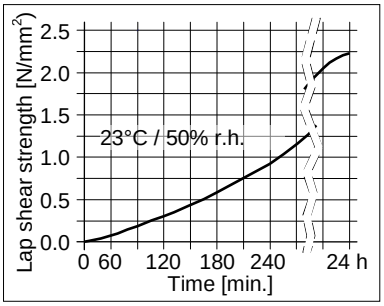

Diagram 1: Strength build up of Sikaflex®-254 Booster

Chemical Resistance

Sikaflex®-254 is resistant to fresh water, seawater, and proprietary aqueous cleaning agents; temporary resistant to fuels, mineral oils, vegetable and animal fats; not resistant to organic acids, 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. As a rule the bond faces must be prepared in accordance with the instructions given in the current Sika Primer Chart for 1 component Polyurethanes. Due to the wide variety of substrate compositions preliminary tests are recommended.
Advice on specific applications is available from the Technical Service Department of Sika Industry.

Application
Drum/Pails: Sikaflex®-254 is dispensed from pails and drums by means of a pneumatic or hydraulic pump system. For the use in conjunction with Sika® Booster the pump system must be equipped with a Sika® Booster dosing and mixing unit (Suitable mixer: Sika 6 elements static mixer Art. Nr. 3445).

Unipacks: It is not possible to use unipacks of Sikaflex®-254 with Booster paste.
Do not apply at temperatures below 10°C or above 30°C. The optimum temperature for substrates is between 15°C and 25°C.
To ensure a uniform thickness of adhesive when compressed, we recommend applying the adhesive in the form of a triangular bead (see figure 1).

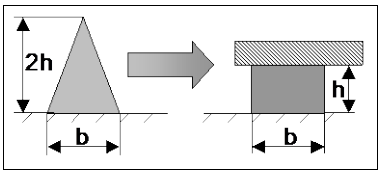

Figure 1: Recommended bead configuration

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

Tooling and finishing
Excellent tooling results are limited to Sikaflex®-254 without Booster.

Removal
Uncured Sikaflex®-254 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 towels or a suitable industrial hand cleaner and water. Do not use solvents!

Overpainting
Sikaflex®-254 can be overpainted after formation of a skin. In case the paint requires a bake process it may be necessary to wait for a full cure. 1C-PUR and 2C-acrylic based paints are usually suitable. Not suitable are oil based paints. All paints have to be tested by carrying preliminary trials under manufacturing conditions. The elasticity of paints is lower than of polyurethanes. 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
- Sika Pre-treatment Chart for 1 Component Polyurethanes
- General Guidelines - Bonding and Sealing with Sikaflex®

Packaging Information

Sikaflex®-254

Unipack	400 ml
Unipack	600 ml
Pail	23 l
Drum	195 l

Sika® Booster Paste

Unipack	600 ml
Pail	23 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

Further information available at:
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www.sika.com

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