BUILDING TRUST

PRODUCT DATA SHEET

SikaForce®-803 L45

Structural elastic 2-component polyurethane adhesive

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Properties		SikaForce®-803 L45 (A)	SikaForce®-803 (B)
Chemical base		Polyol	Isocyanate
Color (CQP001-1)		Black	Black
Density (uncured)		1.24 g/cm³	1.21 g/cm³
	mixed (calculated)	1.23 g/cm³	
Mixing ratio	by volume	1:1	
	by weight	1:1	
Viscosity (CQP029-4)	at 10 s^{-1}	90 Pa·s [A]	110 Pa·s [A]
Application temperature		15 – 30 °C	
Open time (CQP046-11 / ISO 4587)		45 minutes [B,C]	
Handling time (CQP046-11 / ISO 4587)		120 minutes [B, C]	
Shore A hardness (CQP023-1 / ISO 48-4)		80	
Tensile strength (CQP036-1 / ISO 527)		10 MPa [B, D]	
Elongation at break (CQP036-1 / ISO 527)		300 % [B, D]	
E-Modulus (CQP036-1 / ISO 527)	elongation 0.5 – 1 %	25 MPa [B, D]	
Tensile lap-shear strength (CQP046-9 / ISO 4587)		10 MPa [B, C, D]	
Glass transition temperature (CQP509-1 / ISO 6721)		-40 °C [D]	
Shelf life	cartridge	6 months [E]	
	pail	12 months [E]	

CQP = Corporate Quality Procedure
[A] tested at 20 °C
[B] 23 °C / 50 % r. h.
[C] adhesive layer: 25 x 12.5 x 1.5 mm
[D] cured for 1 week at 23 °C
[E] stored between 10 and 25 °C

DESCRIPTION

SikaForce®-803 L45 is a flexible, structural 2-component polyurethane adhesive, which cures at room temperature. It is designed for bonding large composite or coated metal components with stable properties over large temperature span. The adhesive combines long open time with fast curing and strength build-up. While uncured, it has very good non-sag and compressibility behavior.

PRODUCT BENEFITS

- Combination of structural properties and flexibility
- Stable mechanical properties over wide temperature range
- Combining long open time with fast curing for large assemblies
- Good non-sag behavior
- Excellent compressibility
- Accelerated curing at higher temperature
- Does not contain solvents or PVC

AREAS OF APPLICATION

SikaForce®-803 L45 is suitable for structural elastic bonding of composites (e.g., CFRP, GFRP) or coated metals in transportation and general industry.
This product is suitable for experienced professional users only. Tests with actual substrates and conditions have to be performed ensuring adhesion and material compatibility.

CURE MECHANISM
SikaForce®-803 L45 cures by chemical reaction of the two components at room temperature. Higher temperatures accelerate the cure rate and decrease the open time. High humidity reduces the open time as well.
After the open time is reached, the cure reaction proceeds very fast and the viscosity will increase significantly within minutes. The faster the parts are assembled, the faster the adhesion builds up.

CHEMICAL RESISTANCE
In view of potential chemical or thermal exposure, it is required to conduct a project related testing.

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 is crucial for a long lasting bond. All pre-treatment steps must be confirmed by preliminary tests on original substrates considering specific conditions in the assembly process.

Application
Cartridge: Extrude adhesive without mixer to equalize the filling levels. Attach the mixer and dispose of a bead of at least the length of the mixer prior to the application.
SikaForce®-803 L45 shall be dispensed from dual cartridges by pneumatic or electric piston guns. Pails are processed with adequate 2-component equipment.
If dispensed with 2-component equipment, the mixer needs to be tailored for the specific application.

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

Removal
SikaForce®-803 L45 may be removed from tools and equipment with Sika® Remover-208 or another suitable solvent.
Hands and exposed skin have to be washed immediately using hand wipes such as Sika® Cleaner-350H or a suitable industrial hand cleaner and water.
Do not use solvents on skin.

STORAGE CONDITIONS
SikaForce®-803 L45 has to be kept between 10 °C and 30 °C in a dry place. Do not expose it to direct sunlight or frost. After opening of the packaging, the content has to be protected against humidity.
The lowest allowed temperature during transport is -20 °C for max. 7 days.

FURTHER INFORMATION
The information herein is offered for general guidance only. Advice on specific applications is available on request from the Technical Department of Sika Industry.
Copies of the following publications are available on request:
- Safety Data Sheets
- ATI: Mixer alternatives for cartridges

PACKAGING INFORMATION
SikaForce®-803 L45 (A+B)

Dual cartridge	400 ml
Mixer: Sulzer MixPac™ MFQ 08-32D	

SikaForce®-803 L45 (A)

Pail	23 l

SikaForce®-803 (B)

Pail	23 l

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.

DISCLAIMER
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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