

PRODUCT DATA SHEET

SikaForce®-490 L03

Very fast structural 2-component polyurethane adhesive

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Properties	SikaForce®-490 L03 (A)	SikaForce®-490 (B)
Chemical base	Polyol	Isocyanate
Color (CQP001-1)	Black, Beige	Beige
	mixed	Black, Beige
Density	1.47 kg/l	1.17 kg/l
	mixed (calculated)	1.34 kg/l
Mixing ratio	by volume	100 : 100
	by weight	130 : 100
Viscosity (CQP029-4)	at 15 s ⁻¹	65 Pa·s ^A
Viscosity (CQP538-2)	spindle 4, speed 30	15 Pa·s ^A
Application temperature	15 – 25 °C	
Open time (CQP046-11 / ISO 4587)	3 minutes ^{B, C}	
Handling time (CQP046-11 / ISO 4587)	10 minutes ^{B, C}	
Shore D hardness (CQP023-1 / ISO 868)	48 ^D	
Tensile strength (CQP036-1 / ISO 527)	13 MPa ^{B, D, E}	
Elongation at break (CQP036-1 / ISO 527)	95 % ^{B, D, E}	
E-Modulus (CQP036-1 / ISO 527)	40 MPa ^{B, D, E}	
Tensile lap-shear strength (CQP046-9 / ISO 4587)	16 MPa ^{B, D, E}	
Service temperature (CQP513-2)	-40 – 130 °C	
Shelf life	12 months	

CQP = Corporate Quality Procedure

C) adhesive layer: 25 x 12.5 x 0.2 mm

A) tested at 25 °C

D) cured for 16 hours at 70 °C

B) 23 °C / 50 % r. h.

E) specimen type 1 acc. to ISO 37

DESCRIPTION

SikaForce®-490 L03 is a structural 2-component polyurethane adhesive, which cures at room temperature.

Formulated for use in fast industrial bonding processes, the product is suitable for application with automated dosing systems or manual dispensing via cartridges.

PRODUCT BENEFITS

- Good mechanical performances and ageing
- High resistance to vibrations, impacts and good noise damping
- Suitable for assemblies involving dissimilar materials
- Does not contain solvents or PVC

AREAS OF APPLICATION

SikaForce®-490 L03 is suitable for structural elastic bonding of composites (e.g., CFRP, GFRP) or coated metals in marine, 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

The curing of SikaForce®-490 L03 takes place by chemical reaction of the two components. Higher temperatures (max. 100 °C) speed up and lower temperatures slow down the curing process.

CHEMICAL RESISTANCE

The chemical resistance is influenced by several factors such as chemical composition, concentration, period of exposure and temperature. Therefore a project related testing in case of chemical or thermal exposure is required.

METHOD OF APPLICATION

Surface preparation

Surfaces must be clean, dry and free from grease, oil, dust and contaminants. Based on the surface and type of material, physical or chemical pre-treatment might be required. All pre-treatment steps must be confirmed by preliminary tests on original substrates.

Application

Both components must be mixed respecting the defined mixing ratio. SikaForce®-490 L03 is applied manually, by 1:1 dual cartridge or by adequate equipment. Manually mixing can be performed with a spatula or a paddle mixer at ≤ 300 rpm ensuring a homogeneous mixture is achieved. Containers must be closed tightly immediately after each use to prevent moisture ingress. Once opened, the Product shall be consumed within a short period of time. For 50 ml cartridges a manual dispenser is used, whereas for 400 ml cartridges only electric or pneumatic dispensers with piston driven plungers shall be used. In case of cartridges, extrude adhesive without mixer to equalize the filling levels. Attach the defined mixer and dispose of the first few cm of the bead before the application. Apply before reaching half of the pot-life and join parts together within the open time. Consider that, if mixed in larger amounts, the exothermic reaction can reduce pot-life and open time significantly. For advice on selecting and setting up a suitable equipment, contact the System Engineering Department of Sika Industry.

Removal

SikaForce®-490 L03 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

All components of SikaForce®-490 L03 have to be stored at temperature between 15 °C and 25 °C in a dry place. Do not expose it to direct sunlight or frost.

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
- ATL: Mixer alternatives for cartridges

PACKAGING INFORMATION

SikaForce®-490 L03 (A+B)

Dual cartridge	50 ml 400 ml
Mixer: Bayonet Mixer TAH 295-620 (50 ml) Mixer: Turbo Bell Mixer 180AN-824 (400 ml)	

SikaForce®-490 L03 (A)

Pail	40 kg
Drum	290 kg

SikaForce®-490 (B)

Bucket	5 kg
Pail	32 kg
Drum	230 kg

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.

