

## PRODUCT DATA SHEET

# SikaForce®-436 L120

Adhesive for large composite parts

## TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Properties	SikaForce®-436 L120	SikaForce®-436 (B)
Chemical base	Polyol	Isocyanate
Colour (CQP001-1)	Light blue	Beige
Density (uncured)	1.29 g/cm <sup>3</sup>	1.40 g/cm <sup>3</sup>
	mixed (calculated)	1.35 g/cm <sup>3</sup>
Mixing ratio	by volume at 25 °C	100 : 100
	by weight	92 : 100
Viscosity	at 15 s <sup>-1</sup>	95 Pa·s <sup>A</sup>
		55 Pa·s <sup>A</sup>
Open time (CQP046-11 / ISO 4587)	120 minutes <sup>B, C</sup>	
Handling time (CQP046-11 / ISO 4587)	360 minutes <sup>B, C</sup>	
Shore D hardness (CQP023-1 / ISO 868)	55	
Tensile strength (CQP036-1 / ISO 527)	12 MPa <sup>B, D, E</sup>	
Elongation at break (CQP036-1 / ISO 527)	60 % <sup>B, D, E</sup>	
E-Modulus (CQP036-1 / ISO 527)	85 MPa <sup>B, D, E</sup>	
Tensile lap-shear strength (CQP046-9 / ISO 4587)	16 MPa <sup>B, C, D</sup>	
Service temperature (CQP513-1)	-40 °C – 120 °C <sup>D</sup>	
Shelf life	9 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®-436 L120 is a structural 2- component polyurethane adhesive, which cures at room temperature.

It is designed for bonding large composite or coated metal components. Whilst uncured, it has very good non-sag and compressibility behaviour combined with easy tooling.

**PRODUCT BENEFITS**

- Good non-sag behaviour and tooling
- Gap-filling up to 30 mm in vertical applications and up to 60 mm in horizontal applications
- Combining long open time with reduced handling time
- Odour and solvent free
- Usable with dispensing machines equipped with pressure vessels

**AREAS OF APPLICATION**

SikaForce®-436 L120 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.

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## CURE MECHANISM

The curing of SikaForce®-436 L120 takes place by chemical reaction of the two components. Higher temperatures (max. 100 °C) speed up and lower temperatures slow down the curing process. High humidity reduces the open time as well.

## 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 and dust.

Based on the surface and type of material, a physical or chemical pre-treatment might be required. Type of pre-treatment must be determined by preliminary tests.

### Application

SikaForce®-436 L120 is processed by 2-component equipment or by dual cartridges with pneumatic or electric driven piston guns. For cartridges use the mixer as stated, with equipment the mixer needs to be defined by tests.

Prior to application, check both components for crystallisation. Never use components if crystallisation has occurred. Cartridge: Extrude adhesive without the static mixer to equalize the filling levels. Attach the static mixer and dispense of a bead of at least the length of the mixer prior to the application.

Adhesion as well as curing speed can be improved by heat.

For automated applications a suitable filter system has to be used.

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

## Removal

SikaForce®-436 L120 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®-436 L120 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. After opening of the packaging, the content has to be protected against humidity.

For transportation purposes the storage temperature can be exceeded for a maximum period of 2 weeks at temperatures between 0 °C and 40 °C being allowed.

## 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

## PACKAGING INFORMATION

SikaForce®-436 L120 (A+B)

Dual cartridge	400 ml
Mixer: Turbo Bell Mixer 180AN-824	

## 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

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains 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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