

PRODUCT DATA SHEET

SikaForce®-611 L20

(formerly SikaForce®-7701 L20)

2-component polyurethane adhesive for honeycomb sandwich panel bonding

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Properties	Component A SikaForce®-611 L20	Component B SikaForce®-010 (formerly SikaForce®-7010)
Chemical base	Polyols	Isocyanate derivatives
Color (CQP001-1)	Beige	Brown
	mixed	Beige
Cure mechanism	Polyaddition	
Density (uncured)	1.30 g/cm ³	1.23 g/cm ³
	mixed (calculated)	1.28 g/cm ³
Solid content	100 %	100 %
Mixing ratio	by volume 100 : 31	
	by weight 100 : 29	
Viscosity (CQP029-4)	Rheometer, CC25, shear rate 50 s ⁻¹	4 400 mPa·s ^A
	mixed	3 300 mPa·s ^A
Application temperature	15 – 30 °C	
Pot-life (CQP536-3)	20 minutes ^B	
Open time (CQP526-3)	70 minutes ^B	
Press time (CQP590-4)	1 MPa	235 minutes ^B / 4 minutes ^C
Shore D hardness (CQP023-1 / ISO 868)	77 ^D	
Tensile strength (CQP543-1 / ISO 527)	17 MPa ^D	
Elongation at break (CQP543-1 / ISO 527)	75 % ^D	
Tensile lap-shear strength (CQP546-1 / ISO 4587)	9 MPa ^D	
Gross calorific potential (EN ISO 1716)	22.0 MJ/kg	
Shelf life	12 months	9 months

CQP = Corporate Quality Procedure

A) 25 °C

C) 70 °C

B) 23 °C / 50 % r.h.

D) 12 weeks at 23 °C / 50 % r.h.

DESCRIPTION

SikaForce®-611 L20 is a low viscous, thermo-activated 2-component polyurethane adhesive for honeycomb sandwich panels.

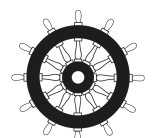
PRODUCT BENEFITS

- Good wetting of honeycomb
- IMO compliance acc. to DNV-GL
- Thermoactivated (short press time possible)
- Good strength
- Solvent free

AREAS OF APPLICATION

SikaForce®-611 L20 is used primarily for bonding of e.g. aluminum and steel in honeycomb sandwich panels.

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®-611 L20 takes place by a chemical reaction of the two components. Higher temperatures speed up the curing process and lower slow it down.

CHEMICAL RESISTANCE

In case of chemical or thermal exposure, conduct project related testing.

METHOD OF APPLICATION

Product preparation

Component A must be stirred thoroughly before use.

Surface preparation

Surfaces must be clean, dry and free from grease, oil, dust and contaminants. After the cleaning process, a physical or chemical pretreatment might be required, depending on surface and type of material. The type of pretreatment must be determined by tests.

Application

Typically a coat weight between 150 and 350 g/m² is applied, depending on the substrates to be bonded. The specific coat weight for a given substrate combination must be determined by tests.

The procedure for manual application is as follows: Ensure that the A-component is stirred thoroughly to avoid any sediment or separation, taking care not to stir too vigorously as this may introduce air into the product. Add the B-component in the specified ratio and stir thoroughly, ensuring a homogeneous mixture is achieved.

Apply before reaching half of the pot-life and join parts together within the open time. Due to the capilar effect of the product, we recommend to join the parts within 10 minutes after application, for optimal strength. Consider that, if mixed in larger amounts, the exothermic reaction can reduce the pot-life and open time significantly.

For automated applications, contact the System Engineering Department of Sika Industry.

Pressing

An adequate bonding pressure is necessary to obtain a good contact between the substrates and the adhesive. The specific pressure is, however, dependent on the core material and must be determined by tests. The pressure must always be below the maximum compressive strength of the core. After starting the press process, do not release the pressure until the press time has elapsed.

Removal

Uncured SikaForce®-611 L20 may be removed from tools and equipment with SikaForce®-096 Cleaner (formerly SikaForce®-7260 Cleaner). Once cured, the material can only be removed mechanically.

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®-611 L20 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 transportation 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

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 enduse 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.

PRODUCT DATA SHEET

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