

PRODUCT DATA SHEET

SikaForce®-646 L1F

Foaming 2-component adhesive for panel bonding

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Properties	Component A SikaForce®-646 L1F	Component B SikaForce®-010 (formerly SikaForce®-7010)
Chemical base	Polyols	Isocyanate derivatives
Color (CQP001-1)	Beige	Brown
	mixed Beige	
Cure mechanism	Polyaddition	
Density (uncured)	1.47 g/cm ³	1.23 g/cm ³
	mixed (calculated) 1.40 g/cm ³	
Solid content	100 %	100 %
Mixing ratio	by volume 100 : 42	
	by weight 100 : 35	
Viscosity (CQP029-4)	Rheometer, PP25, shear rate 10 s ⁻¹ , d=1 mm 4 500 mPa·s ^A	300 mPa·s ^A
	mixed (calculated) 3 400 mPa·s ^A	
Application temperature	15 – 30 °C	
Pot-life (CQP536-3)	1 minute ^A	
Open time (CQP590-3)	3 minutes ^A	
Curing time (CQP590-3)	7 minutes ^A	
Gross calorific potential (EN ISO 1716)	18.8 MJ/kg	
Shelf life	6 months	9 months

CQP = Corporate Quality Procedure

A) 23 °C

DESCRIPTION

SikaForce®-646 L1F is a fast curing, foaming 2-component polyurethane adhesive for bonding sandwich panels and similar constructions of various materials.

PRODUCT BENEFITS

- Suitable for bead and spray application
- Low calorific value
- Low viscosity
- Foaming

AREAS OF APPLICATION

SikaForce®-646 L1F is used for bonding sandwich panels with A2 classification according to EN14509.

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®-646 L1F 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.

During the curing process, carbon dioxide is released from the adhesive. If none of the substrates are porous, measures need to be taken to allow the carbon dioxide to escape.

Application

Typically a coat weight between 100 and 250 g/m² is applied, depending on the substrates to be bonded. The coat weight for a given substrate combination must be determined by tests. For A2 classified panels, the maximum coat weight must be determined by calculation according to EN14509.

The product is only suited for use on continuous production lines.

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

Pressing

An adequate bonding pressure is necessary to obtain a voidless 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®-646 L1F 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®-646 L1F 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.

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