

PRODUCT DATA SHEET

SikaForce®-420 L45

Non sagging assembly adhesive

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

| Properties | Component A SikaForce®-420 L45 | Component B SikaForce®-010 |
|--|---|-------------------------------|
| Chemical base | Polyols | Isocyanate derivatives |
| Color (CQP001-1) | White | Brown |
| | mixed | White |
| CURE MECHANISM | Polyaddition | |
| Density (uncured) | 1.62 g/cm ³ | 1.23 g/cm ³ |
| | mixed (calculated) | 1.54 g/cm ³ |
| Solid content | 100 % | 100 % |
| Mixing ratio | by volume 100 : 25 | |
| | by weight 100 : 19 | |
| Viscosity (CQP029-4) | Rheometer, PP25, shear rate 10 s ⁻¹ , d=1 mm | 85 000 mPa·s ^A |
| | mixed | 40 000 mPa·s ^A |
| Application temperature | 15 – 30 °C | |
| Pot-life (CQP536-3) | 45 minutes ^A | |
| Open time (CQP526-3) | 90 minutes ^A | |
| Press time (CQP590-4) | 1 MPa | 170 minutes ^A |
| Shore D hardness (CQP023-1 / ISO 48-4) | 77 ^B | |
| Tensile strength (CQP543-1 / ISO 527) | 16 MPa ^B | |
| Elongation at break (CQP543-1 / ISO 527) | 15 % ^B | |
| Tensile lap-shear strength (CQP546-1 / ISO 4587) | 11 MPa ^B | |
| Shelf life | 12 months | 9 months |

CQP = Corporate Quality Procedure

^{A)} 23 °C / 50 % r.h.^{B)} 12 weeks at 23 °C / 50 % r.h.**DESCRIPTION**

SikaForce®-420 L45 is a high viscous 2-component polyurethane adhesive for assembling sandwich panels and similar constructions of various materials.

SikaForce®-420 L45 is tested according to FTP Code system and approved according to the IMO Marine Equipment Directives.

PRODUCT BENEFITS

- Non sagging
- IMO approved
- Good gap filling properties
- Solvent free

AREAS OF APPLICATION

SikaForce®-420 L45 is used primarily for assembling of profiles and sandwich constructions of e.g. glass fiber reinforced plastic, wood, metal, ceramic materials and pre-treated plastic materials.

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®-420 L45 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

Surface Preparation

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

Application

Volume and positioning of the adhesive must be defined in a way, that the intended gap is sufficiently filled after joining the parts. The specific applied quantity and position 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. Consider that, if mixed in larger amounts, the exothermic reaction can reduce the pot-life and open time significantly.

For dual cartridges static mixer MFHX 08-24T or MFHX 10-24T has to be used. 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®-420 L45 may be removed from tools and equipment with SikaForce®-096 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®-420 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 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 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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