BUILDING TRUST

PRODUCT DATA SHEET

Sikaflex®-296

Direct glazing adhesive for glass windows in the ship building industry

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Chemical base		1-component polyurethane
Color (CQP001-1)		Black
Cure mechanism		Moisture-curing
Density (uncured)		1.2 kg/l
Non-sag properties		Very good
Application temperature	ambient	10 – 35 °C
Skin time (CQP019-1)		45 minutes [A]
Open time (CQP526-1)		30 minutes [A]
Curing speed (CQP049-1)		See diagram 1
Shrinkage (CQP014-1)		1 %
Shore A hardness (CQP023-1 / ISO 48-4)		45
Tensile strength (CQP036-1 / ISO 527)		6 MPa
Elongation at break (CQP036-1 / ISO 527)		450 %
Tear propagation resistance (CQP045-1 / ISO 34)		14 N/mm
Tensile lap-shear strength (CQP046-1 / ISO 4587)		4.5 MPa
Insulation resistance (CQP079-2 / DIN IEC 60167)		10^8 Ω cm
Service temperature (CQP509-1 / CQP513-1)		-40 – 90 °C
Shelf life	cartridge / unipack	9 months [B]
	drum / pail	6 months [B]

CQP = Corporate Quality Procedure

[A] 23 °C / 50 % r. h.

[B] storage below 25 °C

DESCRIPTION

Sikaflex®-296 is a high performance elastic gap-filling 1-C polyurethane direct glazing adhesive that cures on exposure to atmospheric moisture. It is suitable for almost all kind of minearal glazing application in the ship building industry.
Sikaflex®-296 meets the regulations set out by the International Maritime Organization (IMO).

PRODUCT BENEFITS

- Resistant to ageing and weathering
- Excellent working characteristics
- Solvent- and PVC-free
- Low odor
- Suitable for manual and pump applications
- Black primerless application possible
- Wheelmark approved

AREAS OF APPLICATION

Sikaflex®-296 is designed for direct glazing applications in both the OEM and repair Marine markets. It is suitable for use with all types of mineral glass-based windows used in Marine. Before installing laminated safety glasses, which incorporate heating elements in the PVB sandwich layer, contact Sika's Technical Service Department for advice. Sikaflex®-296 can be tooled to a very fine finish and is suitable for exposed joints.
Seek manufacturer's advice and perform tests on original substrates before using Sikaflex®-296 on materials prone to stress cracking.
Sikaflex®-296 is suitable for experienced professional users only. Test with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.

CURE MECHANISM

Sikaflex®-296 cures by reaction with atmospheric moisture. At low temperatures the water content of the air is generally lower and the curing reaction proceeds somewhat slower (see diagram 1).

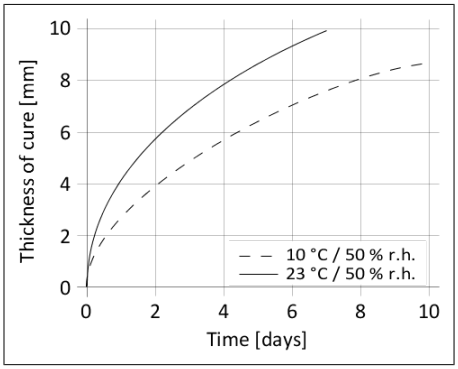

Diagram 1: Curing speed Sikaflex®-296

CHEMICAL RESISTANCE

Sikaflex®-296 is generally resistant to fresh water, seawater, diluted acids and diluted caustic solutions; temporarily resistant to fuels, mineral oils, vegetable and animal fats and oils; not resistant to organic acids, glycolic alcohol, concentrated mineral acids and caustic solutions or solvents.

METHOD OF APPLICATION

Surface preparation

Surfaces must be clean, dry and free from grease, oil, dust and contaminants.
Surface treatment depends on the specific nature of the substrates and is crucial for a long lasting bond. Suggestions for surface preparation may be found on the current edition of the appropriate Sika® Pre-treatment Chart. Consider that these suggestions are based on experience and have in any case to be verified by tests on original substrates.

Application

Sikaflex®-296 can be processed between 10 and 35 °C (climate and product) but changes in reactivity and application properties have to be considered. The optimum temperature for substrate and sealant is between 15 °C and 25 °C.Consider the viscosity increase at low temperature. For easy application, condition the adhesive at ambient temperature prior to use.

To ensure a uniform thickness of the bondline it is recommend to apply the adhesive in form of a triangular bead (see figure 1).

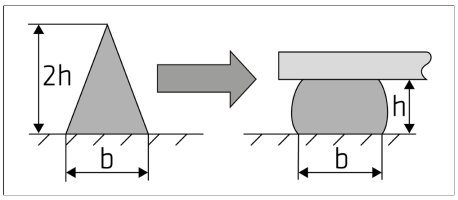

Figure 1: Recommended bead configuration

Sikaflex®-296 can be processed with hand, pneumatic or electric driven piston guns as well as pump equipment. The open time is significantly shorter in hot and humid climate. The glass must always be installed within the open time. Never join bonding parts if the adhesive has built a skin.
For advice on selecting and setting up a suitable pump system, contact the System Engineering Department of Sika Industry.

Tooling and finishing

Tooling and finishing must be carried out within the skin time of the product. It is recommended using Sika® Tooling Agent N. Other finishing agents must be tested for suitability and compatibility prior the use.

Removal

Uncured Sikaflex®-296 can be removed from tools and equipment with Sika® Remover-208 or another suitable solvent. 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!

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
- Sika Pre-treatment Chart
  For Marine Applications
- General Guidelines
  Bonding and Sealing with 1-component Sikaflex®

PACKAGING INFORMATION

Cartridge	300 ml
Unipack	400 ml 600 ml
Pail	23 l
Drum	195 l

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

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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