

## Sikaflex®-296

Direct glazing adhesive for safety-, laminated- and insulation glass windows in the ship building industry

### Technical Product Data

|   |                               |
|---|-------------------------------|
| Chemical base                                       | 1-C polyurethane              |
| Colour (CQP <sup>1)</sup> 001-1)                    | Black                         |
| Cure mechanism                                      | Moisture-curing               |
| Density (uncured) (CQP 006-4)                       | 1.2 kg/l approx.              |
| Non-sag properties (CQP 061-1)                      | very good                     |
| Application temperature                             | ambient 10 - 35°C             |
| Tack-free time <sup>2</sup> (CQP 019-1)             | 45 min. approx.               |
| Open time <sup>2</sup> (CQP 526-1)                  | 30 min. approx.               |
| Curing speed (CQP 049-1)                            | (see diagram)                 |
| Shrinkage (CQP 014-1)                               | 1%                            |
| Shore A hardness (CQP 023-1 / ISO 868)              | 45 approx.                    |
| Tensile strength (CQP 036-1 / ISO 37)               | 6 N/mm <sup>2</sup> approx.   |
| Elongation at break (CQP 036-1 / ISO 37)            | 450% approx.                  |
| Tear propagation resistance (CQP 045-1 / ISO 34)    | 10 N/mm approx.               |
| Tensile-shear strength (CQP 046-1 / ISO 4587)       | 4.5 N/mm <sup>2</sup> approx. |
| Glass transition temperature (CQP 509-1 / ISO 4663) | -45°C approx.                 |
| Electrical resistance (CQP 079-2 / ASTM D 257-99)   | 10 <sup>6</sup> Ω cm approx.  |
| Service temperature (CQP 513-1)                     | -40 - 90°C                    |
| Shelf life (storage below 25°C) (CQP 016-1)         | 9 months                      |

<sup>1)</sup> CQP =Corporate Quality Procedure <sup>2)</sup> 23°C/ 50% r.h.

### Description

Sikaflex®-296 is a high performance elastic gap-filling 1-c polyurethane direct glazing adhesive that cures on exposure to atmospheric moisture forming a durable elastomer. Sikaflex®-296 meets the regulations set out by the International Maritime Organisation (IMO).

Sikaflex®-296 is manufactured in accordance with the ISO 9001 / 14001 quality assurance system and with the responsible care program.

### Product Benefits

- 1-C formulation
- Low odour
- Excellent working characteristics
- Resistant to ageing and weathering
- Solvent- and PVC-free
- Equally suitable for manual application and bulk dispensing
- Black primerless application possible

### Areas of Application

Sikaflex®-296 is designed for direct glazing applications in both the OEM and repair Marine markets, and is suitable for use with all types of mineral glass-based windows.

Before installing laminated safety glasses which incorporate heating elements in the PVB sandwich layer, we recommend that you contact Sika's Technical Service Department for advice.

Sikaflex®-296 can be tooled to a very fine finish and is suitable for exposed joints.

This product 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 humidity. At low temperatures the water content of the air is lower and the curing reaction proceeds at a slower rate (see diagram 1).

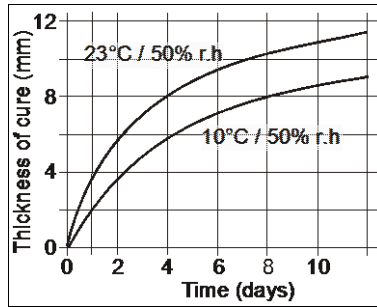


Diagram 1: Curing speed Sikaflex®-296

### Chemical Resistance

Sikaflex®-296 is resistant to fresh water, aqueous cleaning agents (neutral, acid or alkaline types, chlorine free in normal concentrations); temporarily resistant to fuels, mineral oils, vegetable and animal fats and oils; not resistant to organic acids, concentrated mineral acids and caustic solutions and solvents.

The above information is offered for general guidance only. Advice on specific applications will be given on request.

### Method of Application

#### Surface preparation

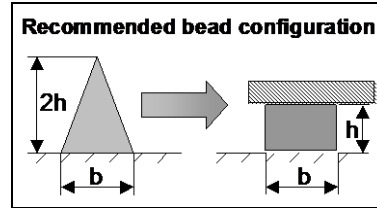
Surface must be clean, dry and free from grease, oil and dust. Additional surface treatment depends on the specific nature of the substrates and the manufacturing process. Therefore, all recommendations must be determined by preliminary test.

Advice on specific applications is available from the Technical Service Department of Sika Industry.

#### Application

Cut off the tip of the nozzle to give desired adhesive bead geometry. For satisfactory results the adhesive must be applied with a hand-operated gun or piston-type compressed-air gun.

To ensure uniform thickness of adhesive bead, we recommend that the adhesive is applied in the form of a triangular bead (see illustration).



Do not apply at temperatures below 10°C or above 35°C. The optimum temperature for substrate and adhesive is between 15°C and 25°C.

### Tooling and finishing

Fill exposed joints completely without voids until slightly overfilled, then remove excess adhesive with a spatula. For smooth finishes use Sika® Tooling Agent N.

### Removal

Uncured Sikaflex®-296 may 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 should be washed immediately using Sika® Handclean Towel or a suitable industrial hand cleaner and water. Do not use solvents!

### Further Information

Copies of the following publications are available on request:

- Safety Data Sheet
- Sika Pre-Treatment Chart Marine
- General guidelines for bonding and sealing with Sikaflex® products

### Packaging Information

|         |        |
|---------|--------|
| Unipack | 600 ml |
|---------|--------|

### Value Bases

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.

### 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.

### Legal Notes

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.



Sika Australia Pty Limited  
ABN 12 001 342 329

aus.sika.com  
1300 22 33 48

