

Technical Data Sheet

Sikaflex®-291

Multifunctional adhesive sealant for marine applications

Technical product data:

Chemical base	one-part polyurethane
Colour	Black, white, grey, brown
Density (DIN 53479) (uncured)	1,25 kg/l approx. depending on colour
Stability (non-sag properties)	good
Cure mechanism	moisture-curing
Tack-free time*	60 minutes approx.
Rate of cure*	3 mm per 24 hrs. (see diagram)
Shrinkage (DIN 52451)	5% approx.
Shore A hardness (DIN 53505)	40 approx.
Tensile strength (DIN 53504)	1,8 N/mm ²
Elongation at break (DIN 53504)	> 400%
Tear strength (DIN 53515)	> 4 N/mm
Glass transition temperature (DIN 53445)	-45°C approx.
Application temperature	+10°C to +35°C
Service temperature (continuous) short term (up to 8 hrs.)	-40°C to +90°C 120°C
Specific resistivity (DIN 53482)	10 ⁹ Ω cm approx.
Movement accomodation factor	10% of joint width
Shelf life (stored below 25°C)	12 months

* = at 23°C and 50% relative humidity

Description:

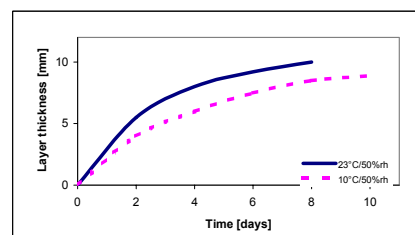
Sikaflex®-291 is a non-sag one-part polyurethane sealant specifically developed for the marine market, which cures on exposure to atmospheric moisture to form a durable elastomer. Sikaflex®-291 is manufactured in accordance with the ISO 9001/14001 quality assurance system.

Product benefits:

- one-part formulation
- elastic
- low odour
- resistant to ageing and weathering
- non-corrosive
- can be overpainted
- can be sanded
- bonds well to a wide variety of substrates
- electrically non-conductive

Cure mechanism:

Sikaflex®-291 cures by reaction with atmospheric moisture. At low temperatures the water content of the air is lower and the curing reaction proceeds more slowly (see diagram).



Areas of application:

Sikaflex®-291 is a multi-purpose product for use in marine construction. It is suitable for making elastic, vibration-resistant joint seals, and can also be used for the adhesive bonding of teak deck and for a variety of interior and exterior sealing applications. Sikaflex®-291 bonds extremely well to the materials commonly used in marine construction. Suitable substrates include wood, metals, metal primers and paint coatings (two-part systems), ceramic materials and plastics (GRP, etc.). Sikaflex®-291 must *not* be used to seal plastics that are prone to stress cracking (e.g. Perspex, polycarbonate, etc.). Once cured, Sikaflex®-291 can easily be sanded down as required.

Chemical resistance:

Sikaflex®-291 is resistant to fresh water, seawater, limewater, sewage effluent and aqueous detergent solutions; temporarily resistant to fuels, mineral oils, vegetable and animal fats and oils; not resistant to organic acids, alcohol, concentrated mineral acids and caustic solutions or solvents. The above information is offered for general guidance only. Advice on specific applications will be given on request.

Method of application:

Surface preparation

The faces of the joint must be clean, dry and free from all traces of grease, oil, wax and dust. The adhesion of the sealant can be improved by wiping the joint with Sika® Cleaner (cleaning and activating agent) and applying the appropriate Sika® Primer. Directions for the preparation and treatment of different substrates are given in the Sika® Primer Table for Marine Applications.

Application

Pierce the cartridge membrane and peel back completely. Place the unipac in the application gun and snip off the closure clip. Cut off the tip of the nozzle to suit joint width and gun the sealant into the joint with a suitable hand-operated or compressed-air gun, taking care to avoid air entrapment.

Once opened, packs should be used up within a few days.

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

For advice on selecting and setting up a suitable pump system, as well as on the techniques of pump-operated application, please contact our System Engineering Department

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the current safety data sheet containing physical, ecological, toxicological and other safety-related data for this type of product.

Tooling and finishing. Tooling and finishing must be carried out within the tack-free time of the sealant. We recommend the use of Sika®-Tooling Agent N. Other finishing agents or lubricants must be tested for suitability / compatibility.

Overpainting. Sikaflex®-291 can be overpainted when tack-free. The paint must be tested for compatibility by carrying out preliminary trials. Baked enamels should not be applied to Sikaflex®-291 until the sealant has attained full cure. It should be understood that the hardness and film thickness of the paint may impair the elasticity of the sealant and lead to cracking.

Removal:

Uncured Sikaflex®-291 may be removed from tools and equipment with Sika® Remover-208. Once cured, the material can only be removed mechanically. Hands and exposed skin should be washed immediately using a suitable industrial hand cleanser and water. Do not use solvents!

Further information:

Copies of the following publications are available on request:

- Sikaflex® Marine Products - Instructions for Use
- Sika® Primer Table for Marine Applications
- Safety Data Sheet

Note:

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 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 proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users should always refer to the most recent issue of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.

Please consult our Technical Sales Department for further information

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