BUILDING TRUST

PRODUCT DATA SHEET

Sikaflex®-291

Multifunctional adhesive sealant for marine applications

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Chemical base		1-component polyurethane
Color (CQP001-1)		White, black
Cure mechanism		Moisture-curing
Density (uncured)	depending on color	1.3 kg/l (10.8 lb/gal)
Non-sag properties		Good
Application temperature	ambient	5 – 40 °C (41 – 104 °F)
Skin time (CQP019-1)		60 minutes [A]
Open time (CQP526-1)		45 minutes [A]
Curing speed (CQP049-1)		(see diagram 1)
Shrinkage (CQP014-1)		5 %
Shore A hardness (CQP023-1 / ISO 48-4)		40
Tensile strength (CQP036-1 / ISO 527)		1.8 MPa (260 psi)
Elongation at break (CQP036-1 / ISO 527)		500 %
Tear propagation resistance (CQP045-1 / ISO 34)		6 N/mm (35 pli)
Service temperature (CQP513-1)		-50 – 90 °C (-58 – 194 °F)
	4 hours	160 °C (320 °F)
	1 hour	180 °C (356 °F)
Shelf life		12 months [B]

CQP = Corporate Quality Procedure

[A] 23 °C (73 °F) / 50 % r. h.

[B] storage below 25 °C (77 °F)

DESCRIPTION

Sikaflex®-291 is a non-sag 1-component polyurethane sealant specifically developed for the marine market, which cures on exposure to atmospheric moisture.

PRODUCT BENEFITS

- Bonds well to a wide variety of substrates
- Good aging and weathering resistance
- Elastic
- Low odor
- Non-corrosive
- Can be over painted
- Can be sanded
- Listed under NSF – Proprietary Substances and Nonfood Compounds (black and white)

AREAS OF APPLICATION

Sikaflex®-291 is a multipurpose product for use in marine constructions. It is suitable to make elastic, vibration-resistant joint seals, and can also be used for a variety of interior sealing applications. Sikaflex®-291 bonds well to the materials commonly used in marine construction like wood, metals, metal primers and paint coatings (2-C systems), ceramic materials and plastics (GRP, etc.). Sikaflex®-291 must not be used to seal plastics that are prone to stress cracking (e.g. Plexiglas, Polycarbonate, etc.). Once cured, Sikaflex®-291 can easily be sanded as required.

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®-291 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).

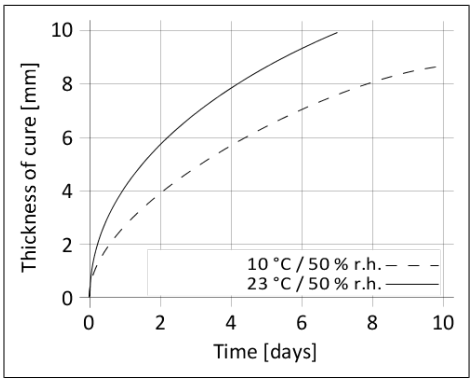

Diagram 1: Curing speed Sikaflex®-291

CHEMICAL RESISTANCE

Sikaflex®-291 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 and dust.

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®-291 can be processed between 5 °C and 40 °C (41 °F and 104°F), 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 (59 °F and 77 °F).

Sikaflex®-291 can be processed with manual, pneumatic or electric driven piston guns.

Tooling and finishing

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

Removal

Uncured Sikaflex®-291 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 a suitable industrial hand cleaner and water.

Do not use solvents on skin!

Overpainting

Sikaflex®-291 can be best painted after formation of a skin. Painting could be improved by treating the joint surface with Sika® Aktivator-100 or Sika® Aktivator-205 prior to paint process. If the paint requires a baking process (> 80 °C), best performance is achieved by allowing the sealant to fully cure first. All paints have to be tested by carrying preliminary trials under manufacturing conditions.

The elasticity of paints is usually lower than that of sealants. This could lead to cracking of the paint in the joint area.

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 1-Component Polyurethanes
- General Guidelines
  Bonding and Sealing with 1-component Sikaflex®

PACKAGING INFORMATION

Cartridge	300 ml
Unipack	600 ml
Tube	3 oz

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.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

LEGAL DISCLAIMER

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