Industry

Sikaflex®-292i

Assembly adhesive for marine application

Technical Product Data

Chemical base	1-C polyurethane
Colour (CQP[1] 001-1)	White
Cure mechanism	Moisture-curing
Density (uncured) (CQP 006-4)	1.3 kg/l approx.
Non-sag properties (CQP 061-1)	Very good
Application temperature[2]	10 - 40°C
Tack-free time[3] (CQP 019-1)	40 min. approx.
Open time (CQP 526-1)	30 min. approx.
Curing speed (CQP 049-1)	(see diagram 1)
Shrinkage (CQP 014-1)	2% approx.
Shore A hardness (CQP 023-1 / ISO 868)	50 approx.
Tensile strength (CQP 036-1 / ISO 37)	3 MPa approx.
Elongation at break (CQP 036-1 / ISO 37)	600% approx.
Tear propagation resistance (CQP 045-1 / ISO 34)	8 N/mm approx.
Tensile lap-shear strength (CQP 046-1 / ISO 4587)	2.0 MPa approx.
Glass transition temperature (CQP 509-1 / ISO 4663)	-40°C (-40°F) approx.
Volume Resistivity (CQP 079-2 / ASTM D 257-99)	5 x 10^9 Ω cm approx.
Service temperature (CQP 513-1) Short term 4 hours 1 hour	-40 - 90°C 120°C 140°C
Shelf life (storage below 25°C) (CQP016-1)	12 months

[1] CQP= Corporate Quality Procedure [2] climate, substrate, product [3] 23°C / 50% r.h.

Description

Sikaflex®-292i is a non-sag 1-C polyurethane adhesive of thixotropic, paste-like consistency which cures on exposure to atmospheric moisture to form a durable elastomer. Sikaflex®-292i exhibits excellent adhesive properties and a high degree of mechanical strength. Sikaflex®-292i meets the low spread of flame requirements set out by the International Maritime Organisation (IMO).
Sikaflex®-292i is manufactured in accordance with the ISO 9001 / 14001 quality assurance system and with the responsible care program.

Product Benefits

- Wheelmark approved
- 1-C formulation
- Elastic
- Can be over painted
- Good gap-filling properties
- Capable of withstanding high dynamic stresses
- Vibration-damping
- Non corrosive
- Electrically non conductive
- Bonds well to a wide variety of substrates
- Solvent free and very low VOC

Areas of Application

Sikaflex®-292i is suitable for structural joints in marine constructions which will be subjected to high dynamic stresses. Suitable to bond metals, particularly aluminium (including anodized finishes), metal primers and paint coatings (2-C systems), or ceramic materials, plastics such as GRP (unsaturated polyester resin), ABS, etc. Clear plastics and mineral glass should not be bonded with Sikaflex®-292i.
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.

Powered by i-Cure® Technology

Cure Mechanism

Sikaflex®-292i cures by reaction with atmospheric moisture. At low temperature the water content of the air is generally lower and the curing reaction proceeds slower (see diagram 1).

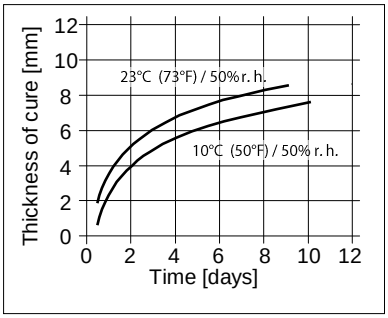


Diagram 1: Curing speed for Sikaflex®-292i

Chemical Resistance

Sikaflex®-292i is resistant to fresh water, seawater, and proprietary aqueous cleaning agents; temporarily resistant to fuels, mineral oils, vegetable and animal fats; not resistant to organic acids, 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

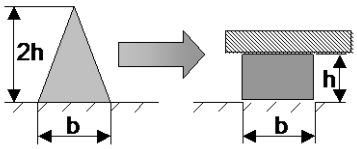
Surface preparation

Surfaces must be clean, dry and free from all traces of grease, oil and dust. The surfaces must be prepared in accordance with the instructions given in the current edition of the Sika® Pre-Treatment Chart for Marine Applications.
Advice on specific applications is available from the Technical Service Department of Sika Industry.

Application

Cut off the tip of the nozzle. Ensuring uniform thickness of adhesive when compressed, we recommend do apply the adhesive in the form of a triangular bead (see illustration).
Do not apply at temperatures below 10°C or above 40°C. The optimum temperature for substrate and adhesive is between 15°C and 25°C. For cartridge application we recommend the use of a compressed air piston type cartridge gun.

Recommended bead configuration



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

Removal

Uncured Sikaflex®-292i 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 should be washed immediately using Sika® Handclean towels or a suitable industrial hand cleanser and water. Do not use solvents!

Overpaintability

Sikaflex®-292i can be overpainted after formation of a skin. In case the paint requires a bake process it may be necessary to wait for a full cure. 1C-PUR and 2C-acrylic based paints are usually suitable. Not suitable are oil based paints. All paints have to be tested by carrying preliminary trials under manufacturing conditions. The elasticity of paints is lower than of polyurethanes. This could lead to cracking of the paint film in the joint area..

Further Information

Copies of the following publications are available on request:
- Material Safety Data Sheets
- Sika Pre-Treatment Chart for Marine Applications
- General Guidelines Bonding and Sealing with Sikaflex®

Packaging Information

Cartridge	300 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 Material Safety Data Sheets containing physical, ecological, toxicological and other safety-related data.

Legal Notes

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