

Sikaflex®-291 LOT

Marine Adhesive and Sealant

Technical Product Data (typical values)

Chemical base	1-C polyurethane
Color	White, black, mahogany
Cure mechanism	Moisture Cure
Density (uncured)	10.6 lb/gal
Application temperature	product 41 °F to 110 °F (5 °C - 43 °C)
Tack free time ¹	3 to 5 hours
Curing speed	(see diagram 1)
Shore A-hardness (ASTM D 2240)	40 to 45
Elongation at break (ASTM D 412)	700%
Peel strength	30 lbs/in on fibreglass 25 lbs/in on gelcoat
Tensile lap-shear strength (ASTM D 1002)	120 psi
Service range	-40 °F to 180 °F

¹⁾ 73 °F (23 °C) / 50% r.h.

Description

Sikaflex®-291 LOT is a 1-component, marine grade polyurethane elastomeric adhesive and sealant. It is a moisture cured, non-sag system designed with a long open time for jobs that require more time. Sikaflex®-291 LOT is manufactured in accordance with ISO 9001 / 14001 quality assurance system and the responsible care program.

Product Benefits

- Use above and below water line
- Resists salt water
- Long open time capability for humid climates or jobs requiring more time
- Paintable
- Versatile packaging
- Excellent bond
- Permanently elastic
- High strength
- Sandable
- NSF approved for potable water
- USDA approved for incidental food contact

Areas of Application

General all-purpose marine sealant, which may be used for light duty bonding.

This product is suitable for experienced professional users only. Tests with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.

Industry



Cure Mechanism

Moisture cured.

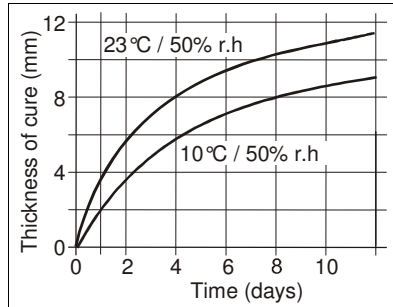


Diagram 1: Curing speed Sikaflex®-291 LOT

Chemical Resistance

Sikaflex®-291 LOT has very good long term resistance to fresh water, sea water, aqueous cleaning agents, weak acids and weak bases and to most teak oils. Brief contact with fuels and lubricants has no significant effect. It is recommended to test on a small area first to ensure compatibility. Sikaflex®-291 LOT has very reduced resistance to solvents, concentrated acids and bases and caustic solutions. Advice on specific applications will be given on request. Contact the Technical Service Department of Sika Industry at 888-832-7452.

Method of Application

Surface preparation

Surfaces must be clean, dry, free of oil and grease, and of sound quality. Thoroughly remove all loose particles such as residues of color, splashes, etc. Clean surface with a strong jet of compressed air, sandblast, solvent. Pretest substrates for adhesion. Cleaners and/or primers may be required to achieve optimal adhesion. Please refer to the Surface Preparation Guidelines for specific application information. Advice on specific applications is available from the Technical Service Department of Sika Industry.

Application

Recommended application temperatures: 40°F to 110°F. For

cold-weather application, store units at approximately 70°F; remove just prior to using. Make sure joint is frost-free. Cut tip to joint size. Puncture airtight seal. Install with hand or power operated gun. For best performance, Sikaflex®-291 LOT should be gunned into joint when joint slot is at mid-point of its designed expansion and contraction. To facilitate tooling, wet pointing tool or finger with soap solution. For advice on selecting and setting up a suitable pump system please contact the System Engineering Department of Sika Industry at 888-832-7452.

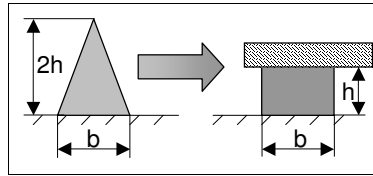


Figure 1: Recommended bead configuration

Tooling and finishing

To facilitate tooling, wet pointing tool or finger with soap solution.

Removal

Uncured Sikaflex®-291 LOT may be removed from tools and equipment with mineral spirit or another suitable solvent. 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 on hands!

Overpainting

Sikaflex®-291 LOT can be overpainted. The paint must be tested for compatibility by carrying out preliminary trials. Baked enamels should not be applied to Sikaflex®-291 LOT 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 of the paint film. Note: Some anti-fouling bottom paint systems interact with organic sealants such as Sikaflex 291LOT causing sealant to soften and depolymerize. Before applying anti-fouling paint system, always call Sika Technical Service at 888-832-7452.

Limitations

- Do not apply on frozen surface or through standing water.
- Do not apply over silicones or in the presence of curing silicones.
- Avoid contact with alcohol and alcohol containing solvents during cure.
- Allow minimum of 1 week full cure prior to total water immersion situations.
- Maximum chlorine exposure 2.5 ppm.
- Do not use as a deck seam sealant.

Important Considerations

When applying sealant, avoid air entrapment. Protect from action of water during curing period.

CAUTION: IRRITANT.

Irritant;Sensitizer:Contains Polyisocyanate pre-polymer, xylene. May cause skin/eye/respiratory irritation. May cause skin and/or respiratory sensitization after prolonged or repeated contact. Avoid contact. Xylene may cause headaches, dizziness or other CNS effects; and may cause liver or kidney effects. Use only with adequate ventilation. Use of safety goggles and chemical resistant gloves is recommended. In case of exceedance of PELs, use an appropriate, properly fitted NIOSH/MSHA approved respirator. Remove contaminated clothing.

HMIS

Health	*2
Flammability	1
Reactivity	0
Personal Protection	C

Further information available at: www.sikaindustry.com

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Further Information

Copies of the following publications are available on our website www.sikaindustry.com:

- Material Safety Data Sheets
- Product Data Sheet
- Sika Primer Chart
- General guidelines for bonding and sealing with Sika products

In case of emergency call:

Chemtrec: 800-424-9300

International: 703-527-3887

For further information and advice regarding transportation, handling, storage and disposal of chemical products, users should refer to the actual Material Safety Data Sheets containing physical, ecological, toxicological and other safety related data. It is highly recommended to read the actual Material Safety Data Sheet before using the product.

- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- KEEP CONTAINER TIGHTLY CLOSED

Packaging Information

Cartridge	300 ml
Unipac	300 ml

Value Basis

All technical data stated in this Product Data Sheet are based on laboratory tests only. Actual measured data in the field may vary due to site specific conditions which are not known to Sika and beyond our control.

Handling and Storage

Sikaflex®-291LOT should not be stored at temperatures in excess of 77°F. Properly stored in cool, dry conditions, the unopened cartridges and unipacs have a shelf life of 12 months and unopened pails and drums have a shelf life of 6 months.

Clean Up

Uncured sealant may be removed with solvent. Cured sealant is only removed mechanically. In case of spills or leaks, wear suitable protective equipment, contain spill, collect with absorbent material and transfer to suitable container. Ventilate area. Avoid contact. Dispose of in accordance with current, applicable local, state, and federal regulations.

Limited Material Warranty

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor. **NO OTHER WARRANTIES IMPLIED OR EXPRESS SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

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Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's most current Product Data Sheet, product label and Material Safety Data Sheet which are available at www.sikaindustry.com. Nothing contained in any Sika materials relieves the user of the obligation to read and follow the warnings and instruction for each Sika product as set forth in the current Product Data Sheet, product label and Material Safety Data Sheet prior to product use.

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