

## Sikaflex®-1a

One part polyurethane, elastomeric sealant/adhesive

<b>Description</b>	Sikaflex-1a is a premium-grade, high-performance, moisture-cured, 1-component, polyurethane-based, non-sag elastomeric sealant. Meets Federal specification TT-S-00230C, Type II, Class A. Meets ASTM C-920, Type S, Grade NS, Class 35, use T, NT, O, M, G, I; Canadian standard CAN/CGSB 19.13-M87.
<b>Where to Use</b>	<ul style="list-style-type: none"> <li>Designed for all types of joints where maximum depth of sealant will not exceed 1/2 in.</li> <li>Excellent for small joints and fillets, windows, door frames, reglets, flashing, common roofing detail applications, and many construction adhesive applications.</li> <li>Suitable for vertical and horizontal joints; readily placeable at 40°F.</li> <li>Has many applications as an elastic adhesive between materials with dissimilar coefficients of expansion.</li> <li>Submerged conditions, such as canal and reservoir joints.</li> </ul>
<b>Advantages</b>	<ul style="list-style-type: none"> <li>Eliminates time, effort, and equipment for mixing, filling cartridges, pre-heating or thawing, and cleaning of equipment.</li> <li>Fast tack-free and final cure times.</li> <li>High elasticity - cures to a tough, durable, flexible consistency with exceptional cut and tear-resistance.</li> <li>Stress relaxation.</li> <li>Excellent adhesion - bonds to most construction materials without a primer.</li> <li>Excellent resistance to aging, weathering.</li> <li>Proven in tough climates around the world.</li> <li>Odorless, non-staining.</li> <li>Jet fuel resistant.</li> <li>Certified to the NSF/ANSI Standard 61 for potable water.</li> <li>Urethane-based; suggested by EPA for radon reduction.</li> <li>Paintable with water-, oil- and rubber-based paints.</li> <li>Capable of ±35% joint movement.</li> </ul>
<b>Coverage</b>	10.1 fl. oz. cartridge seals 12.4 lineal ft. of 1/2 x 1/4 in. joint. 20 fl. oz. uni-pac sausage seals 24 lineal ft. of 1/2 x 1/4 in. joint.
<b>Packaging</b>	Disposable 10.1 fl. oz., moisture-proof composite cartridges, 24/case; and uni-pac sausages, 20 fl. oz., 20/carton.

### Typical Data (Material and curing conditions @ 73°F (23°C) and 50% R.H.)

RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.

<b>Shelf Life</b>	10.1 fl. oz. cartridges	12 months
	20 fl. oz. uni-pac sausages	12 months
	5 gallon pail	6 months
	55 gallon drum	6 months
<b>Storage Conditions</b>	Store at 40°-95°F (4°-35°C). Condition material to 65°-75°F before using.	
<b>VOC Content</b>	40 g/L	
<b>Colors</b>	White, colonial white, aluminum gray, limestone, black, dark bronze, capitol tan, stone and medium bronze. Special architectural colors on request.	
<b>Application Temperature</b>	40° to 100°F. Sealant should be installed when joint is at mid-range of its anticipated movement.	
<b>Service Range</b>	-40° to 170°F	
<b>Curing Rate</b>	Tack-free time	3 to 6 hours
	Tack-free to touch	3 hours
	Final cure	4 to 7 days
<b>Tear Strength (ASTM D-624)</b>	55 lb./in.	
<b>Shore A Hardness (ASTM C-661)</b>	21 day	40±5
<b>Movement Capability (ASTM C-719)</b>	+/- 35%	
<b>Tensile Properties (ASTM D-412)</b>		
	21 day Tensile Stress	175 psi (1.21 MPa)
	Elongation at Break	550%
	Modulus of Elasticity	25% 35 psi (0.24 MPa)
		50% 60 psi (0.41 MPa)
		100% 85 psi (0.59 MPa)
<b>Adhesion in Peel (TT-S-00230C, ASTM C 794)</b>		
	Substrate Peel Strength	Adhesion Loss
	Concrete 20 lb.	0%
	Aluminum 20 lb.	0%
	Glass 20 lb.	0%
<b>Weathering Resistance</b>	Excellent	
<b>Chemical Resistance</b>	Good resistance to water, diluted acids, and diluted alkalines. Consult Technical Service for specific data.	



## How to Use

### Surface Preparation

Clean all surfaces. Joint walls must be sound, clean, dry, frost-free, and free of oil and grease. Curing compound residues and any other foreign matter must be thoroughly removed. A roughened surface will also enhance bond. Install bond breaker tape or backer rod to prevent bond at base of joint.

### Priming

Priming is not usually necessary. Most substrates only require priming if testing indicates a need or where sealant will be subjected to water immersion after cure. Consult Sikaflex Primer Technical Data Sheet or Technical Service for additional information on priming.

### Application

Recommended application temperatures: 40°-100°F. For cold weather application, condition units at approximately 70°F; remove prior to using.

For best performance, Sikaflex-1a should be gunned into joint when joint slot is at mid-point of its designed expansion and contraction.

Place nozzle of gun into bottom of the joint and fill entire joint. Keep the nozzle in the sealant, continue on with a steady flow of sealant preceding the nozzle to avoid air entrapment.

Avoid overlapping of sealant to eliminate entrapment of air. Tool sealant to ensure full contact with joint walls and remove air entrapment. Joint dimension should allow for 1/4 inch minimum and 1/2 inch maximum thickness for sealant. Proper design is 2:1 width to depth ratio,

For use in horizontal joints in traffic areas, the absolute minimum depth of the sealant is 1/2 in. and closed cell backer rod is recommended.

### Limitations

- Allow 1-week cure at standard conditions when using Sikaflex-1a in total water immersion situations and prior to painting.
- When overcoating with water, oil and rubber based paints, compatibility and adhesion testing is essential.
- Avoid exposure to high levels of chlorine. (Maximum continuous level is 5 ppm of chlorine.)
- Maximum depth of sealant must not exceed 1/2 in.; minimum depth is 1/4 in.
- Maximum expansion and contraction should not exceed 25% of average joint width.
- Do not cure in the presence of curing silicone sealants.
- Avoid contact with alcohol and other solvent cleaners during cure.
- Do not apply when moisture-vapor-transmission condition exists from the substrate as this can cause bubbling within the sealant.
- Use opened cartridges and uni-pac sausages the same day.
- When applying sealant, avoid air-entrapment.
- Since system is moisture-cured, permit sufficient exposure to air.
- White color tends to yellow slightly when exposed to ultraviolet rays.
- Light colors can yellow if exposed to direct gas fired heating element.
- The ultimate performance of Sikaflex-1a depends on good joint design and proper application with joint surfaces properly prepared.
- The depth of sealant in horizontal joints subject to traffic is 1/2 in.
- Do not tool with detergent or soap solutions.
- Do not use in contact with bituminous/asphaltic materials.

### Caution

**WARNING: IRRITANT, SENSITIZER.** Contains Polyisocyanate Prepolymer (Mixture), Xylene (CAS 1330-20-7). Causes eye irritation. May cause skin/respiratory irritation. May cause skin and/or respiratory sensitization after prolonged contact. May be harmful if swallowed. Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage. Headaches and dizziness may result. **Deliberate misuse by inhalation of vapors may be harmful or fatal. Strictly follow all usage, handling and storage instructions.**

### Handling & Storage

Avoid direct contact. Wear personal protective equipment (chemical resistant goggles/gloves/clothing) to prevent direct contact with skin and eyes. Use only in well ventilated areas. Open doors and windows during use. Use a properly fitted NIOSH respirator if ventilation is poor. Wash thoroughly with soap and water after use. Remove contaminated clothing and laundry before reuse. Store in cool dry well ventilated area.

### Cleanup

Use personal protective equipment (chemical resistant gloves/goggles/clothing). Without direct contact, remove spilled or excess product and placed in suitable sealed container. Dispose of excess product and container in accordance with applicable environmental regulations.

### First Aid Measures

**Eyes:** Hold eyelids apart and flush thoroughly with water for 15 minutes. **Skin:** Remove contaminated clothing. Wash skin thoroughly for 15 minutes with soap and water. **Inhalation:** Remove to fresh air. **Ingestion:** Do not induce vomiting. Dilute with water. Contact physician. **In all cases contact a physician immediately if symptoms persist.**

## Linear Feet of Sealant per Gallon

Width	Depth	
	Inches	
1/4	308.0	
1/2	154.0	77.0
3/4	102.7	51.3
1	77.0	38.5
1 1/2	61.6	30.8
1 3/4	51.3	25.7

**KEEP CONTAINER TIGHTLY CLOSED • KEEP OUT OF REACH OF CHILDREN • NOT FOR INTERNAL CONSUMPTION • FOR INDUSTRIAL USE ONLY**  
 All information provided by Sika Corporation ("Sika") concerning Sika products, including but not limited to, any recommendations and advice relating to the application and use of Sika products, is given in good faith based on Sika's current experience and knowledge of its products when properly stored, handled and applied under normal conditions in accordance with Sika's instructions. In practice, the differences in materials, substrates, storage and handling conditions, actual site conditions and other factors outside of Sika's control are such that Sika assumes no liability for the provision of such information, advice, recommendations or instructions related to its products, nor shall any legal relationship be created by or arise from the provision of such information, advice, recommendations or instructions related to its products. The user of the Sika product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with the full application of the product(s). Sika reserves the right to change the properties of its products without notice. All sales of Sika product(s) are subject to its current terms and conditions of sale which are available at [www.sikausa.com](http://www.sikausa.com) or by calling 800-933-7452.

**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 Technical Data Sheet, product label and Material Safety Data Sheet which are available online at [www.sikausa.com](http://www.sikausa.com) or by calling Sika's Technical Service Department at 800-933-7452. 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 Technical Data Sheet, product label and Material Safety Data Sheet prior to product use.**

**LIMITED 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 Technical 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 EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKASHALL NOT BELIEVABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKASHALL 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.**

Visit our website at [www.sikausa.com](http://www.sikausa.com)

1-800-933-SIKA NATIONWIDE

**Regional Information and Sales Centers.** For the location of your nearest Sika sales office, contact your regional center.

**Sika Corporation**  
 201 Polito Avenue  
 Lyndhurst, NJ 07071  
 Phone: 800-933-7452  
 Fax: 201-933-6225

**Sika Canada Inc.**  
 601 Delmar Avenue  
 Pointe Claire  
 Quebec H9R 4A9  
 Phone: 514-697-2610  
 Fax: 514-694-2792

**Sika Mexicana S.A. de C.V.**  
 Carretera Libre Celaya Km. 8.5  
 Fracc. Industrial Balvanera  
 Corregidora, Queretaro  
 C.P. 76920  
 Phone: 52 442 2385800  
 Fax: 52 442 2250537



Sika and Sikaflex are registered trademarks. Printed in Canada.

