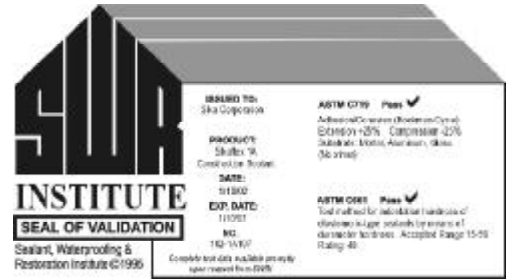


Product Data Sheet
Edition 8.2003
Identification no. 431
Sikaflex-1a



Sikaflex®-1a

One part polyurethane, elastomeric sealant/adhesive

Construction

Description	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 25, use T, NT, O, M, G, I; Canadian standard CAN/CGSB 19.13-M87.
Where to Use	<ul style="list-style-type: none"> Designed for all types of joints where maximum depth of sealant will not exceed ½ in. Excellent for small joints and fillets, windows, door frames, reglets, flashing, and many construction adhesive applications. Suitable for vertical and horizontal joints; readily placeable at 40°F. Has many applications as an elastic adhesive between materials with dissimilar coefficients of expansion. Submerged conditions, such as canal and reservoir joints.
Advantages	<ul style="list-style-type: none"> Eliminates time, effort, and equipment for mixing, filling cartridges, pre-heating or thawing, and cleaning of equipment. Fast tack-free and final cure times. High elasticity - cures to a tough, durable, flexible consistency with exceptional cut and tear-resistance. Stress relaxation. Excellent adhesion - bonds to most construction materials without a primer. Excellent resistance to aging, weathering. Proven in tough climates around the world. USDA-approved. Odorless, non-staining. Jet fuel resistant. NSF-approved for potable water contact. Urethane-based; suggested by EPA for radon reduction. Paintable with water-, oil- and rubber-based paints. Capable of ±25% joint movement.

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

Shelf Life	10.3 fl. oz. cartridges 15 months in original unopened packaging
	20 fl. oz. uni-pac sausages 15 months in original unopened packaging
	5 gal. pail 9 months in original unopened packaging
	55 gal. pail 9 months in original unopened packaging
Storage Conditions	Store at 40°-95°F (4°-35°C). Condition material to 65°-75°F before using.
Colors	White, colonial white, aluminum gray, limestone, black, dark bronze, capitol tan. Special architectural colors on request.
Application Temperature	40° to 100°F. Sealant should be installed when joint is at mid-range of its anticipated movement.
Service Range	-40° to 170°F
Curing Rate	Tack-free time 4 hours (TT-S-00230C)
	Tack-free to touch 3 hours
	Final cure 4 to 7 days
Tear Strength (ASTM D-624)	50 lb./in.
Shore A Hardness (ASTM D-2240)	21 day 40±5
Tensile Properties (ASTM D-412)	
21 day Tensile Stress	200 psi (1.37MPa)
Elongation at Break	500%
Modulus of Elasticity	25% 35 psi (0.24 MPa)
	50% 60 psi (0.41 MPa)
	100% 85 psi (0.59 MPa)
Adhesion in Peel (TT-S-00230C, ASTM C 794)	
Substrate Peel Strength Adhesion Loss	
Concrete 20 lb. 0%	
Aluminum 20 lb. 0%	
Glass 20 lb. 0%	

Weathering Resistance Excellent

Chemical Resistance Good resistance to water, diluted acids, and diluted alkalines. Consult Technical Service for specific data.



Coverage 10.3 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.

Packaging Disposable 10.3 fl. oz., moisture-proof composite cartridges, 24/case; and uni-pac sausages, 20 fl. oz., 20/carton.

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. 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 as required. 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. Tool as necessary, dry or with clean water.

- 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.
 - Some minimal surface skinning of product may be present in bulk packaging (pails, drums) with in its shelf life. Cut and discard cured material to expose the uncured product that still may be used.
 - 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 slightly if exposed to direct gas fired heating elements prior to formation of initial skin.
 - 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.

Caution

Irritant Keep away from open flames and high heat. Contains xylene; avoid breathing vapors. Use with adequate ventilation.

Combustible Avoid skin and eye contact. Use of NIOSH approved organic vapor respirator, safe and chemical-resistant gloves recommended. Remove contaminated clothing and shoes.

First Aid In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes; contact physician. Wash clothing before re-use. Discard contaminated shoes.

Clean Up Uncured material can be removed with approved solvent. Cured material can only be removed mechanically. For spillage, collect, absorb, and dispose of in accordance with current, applicable local, state, and federal regulations.
 KEEP CONTAINER TIGHTLY CLOSED
 NOT FOR INTERNAL CONSUMPTION
 KEEP OUT OF REACH OF CHILDREN
 FOR INDUSTRIAL USE ONLY
 CONSULT MATERIAL SAFETY DATA SHEET FOR MORE INFORMATION

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. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES.

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Quality Certification Numbers: Lyndhurst: FM 69711 (ISO 9000), FM 70421 (QS 9000), Marion: FM 69715, Kansas City: FM 69107, Santa Fe Springs: FM 69408

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Linear Feet of Sealant per Gallon

Inches	Depth					
	¼	½	¾	1	1¼	1½
¼	308.0					
½	154.0	77.0				
¾	102.7	51.3	34.2			
1	77.0	38.5	25.7	19.3		
1¼	61.6	30.8	20.5	15.4	12.3	
1½	51.3	25.7	17.1	12.8	10.3	8.6

Width