BUILDING TRUST

PRODUCT DATA SHEET

Sikaflex®-1A

ELASTOMERIC JOINT SEALANT / ADHESIVE

PRODUCT DESCRIPTION

Sikaflex®-1A is a premium-grade, high-performance, moisture-cured, 1-component, polyurethane-based, non-sag elastomeric sealant. Sikaflex-1a can be used in green and damp concrete applications. Meets Federal Specification TT-S-00230C, Type II, Class A. Meets ASTM C920, Type S, Grade NS, Class 35, Use T, NT, O, M, A, I. Canadian standard CAN/CGSB 19.13-M87.

USES

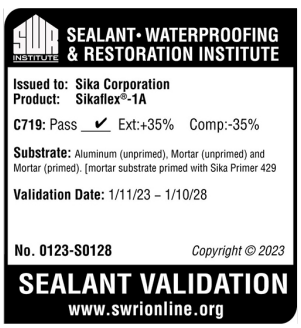
- Designed for all types of joints where maximum depth of sealant will not exceed 1/2 in.
- Excellent for small joints and fillets, windows, door frames, reglets, flashing, common roofing detail applictions, and many construction adhesive applications.
- Suitable for vertical and horizontal joints; readily 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.

CHARACTERISTICS / ADVANTAGES

- 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.
- Can be applied to green concrete 24 hours after pour
- Can be applied to damp concrete 1 hour after getting wet
- Non-staining.
- Jet fuel resistant.
- Certified to NSF/ANSI/CAN 61 for potable water (meets applicable requirements of NSF/ANSI 600).
- Urethane-based; suggested by EPA as a caulk and crack sealant for radon reduction.
- Paintable with water-, oil- and rubber-based paints.
- Capable of ±35% joint movement.

APPROVALS / STANDARDS

- ASTM C920, Type S, Grade NS, Class 35, Use T, NT, O, M, A, I
- SWRI validated acc. to ASTM C719 (No. 0123-S0128)
- Federal specification TT-S-00230 C Type II, Class A
- Canadian Standard CAN/CGSB 19.13-M87
- Certified to NSF/ANSI/CAN 61 for potable water (meets applicable requirements of NSF/ANSI 600).



PRODUCT INFORMATION

Packaging	10.1 fl. oz. (300 ml) cartridge, 20 fl. oz. (600 ml) sausage, 4.5 gal (17 L) in a 5 gal pail, 52 gal (197 L) in a 55 gal drum
Color	White, colonial white, aluminum gray, limestone, black, dark bronze, capitol tan, stone and medium bronze. Special architectural colors on request.
Shelf Life	**Cartridge**: 15 months in original, unopened packaging. **Sausage**: 18 months in original, unopened packaging. **Pail and Drum**: 6 months in original, unopened packaging.
Storage Conditions	Store at 40°-95°F (4°-35°C).

TECHNICAL INFORMATION

Testing	(21 day) 45±5	(ASTM C 661)
Elongation at Break	550 %	(ASTM D-412)
Tear Strength	55 lb./in.	(ASTM D-624)
Movement Capability	±35 %	(ASTM C-719)
Chemical Resistance	Good resistance to water, diluted acids, and diluted alkalines. Consult Technical Service for specific data.	
Resistance to Weathering	Excellent	
Service Temperature	–40 °F to +170 °F	

Adhesion in peel (ASTM C-794) (TT-S-00230C)

Substrate	Peel Strength	Adhesion loss
Concrete	20 lbs	0 %
Aluminium	20 lbs	0 %
Glass	20 lbs	0 %

Tensile stress at specified elongation (ASTM D 412)

21 day Tensile Stress	175 psi (1.21 MPa)
Stress @ 100%	85 psi (0,59 N/mm²)

APPLICATION INFORMATION

Coverage

10.1 oz Cartridge: Yield in Linear Feet

Width/Depth	1/4"	3/8"	1/2"
1/4"	24.3		
3/8"	16.2	10.8	
1/2"	12.1	8.1	6.1
3/4"	8.1	5.4	4.0
1"			3.0
1.25"			2.4
1.5"			2.0

20 oz Sausage: Yield in Linear Feet

Width/Depth	1/4"	3/8"	1/2"
1/4"	48.1		
3/8"	32.1	21.4	
1/2"	24.1	16.0	12.0
3/4"	16.0	10.7	8.0
1"			6.0
1.25"			4.8
1.5"			4.0

1 gallon: Yield in Linear Feet

Width/Depth	1/4"	3/8"	1/2"
1/4"	307.9		
3/8"	205.3	136.8	
1/2"	153.9	102.6	77.0
3/4"	102.6	68.4	51.3
1"			38.5
1.25"			30.8
1.5"			25.7

Cure Time	4 to 7 days (73 °F / 50 % r.h.)
Curing Rate	up to 1/8" after 24 hours (73 °F / 50 % r.h.)
Tack Free Time	3 to 6 hours (73 °F / 50 % r.h.)

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

LIMITATIONS

- Allow 1 week cure at standard conditions when using Sikaflex-1a in total water immersion situations.
- When overcoating with water, oil and rubber based paints, compatibility and adhesion testing is essential.
- Sealant should be allowed to cure for 7 days prior to overcoating
- Avoid exposure to high levels of chlorine. (Maximum continuous level is 5 ppm of chlorine.)
- Do not use in swimming pools or other submerged conditions where the sealant will be exposed to strong oxidizers. Avoid submerged conditions where water temperatures will exceed 120 °F (50 °C)
- Maximum depth of sealant must not exceed 1/2 in.; minimum depth is 1/4 in.
- Maximum expansion and contraction should not exceed 35% 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 units 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.
- In green concrete applications sealing joints in poor or low strength concrete 24 hours after pour may impact ability of sealant to gain proper adhesion.
- In damp concrete applications all standing water and excess water must be eliminated prior to the 60 minute waiting time.

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.

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

Product Conditioning: Condition material to 65°-75°F before using.
Clean all surfaces. Joint walls must be sound, clean, 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 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.
For green concrete applications control joints must be cut 8 hours prior to sealant installation and in expansion joint forms must be removed 4 hours prior to sealant installation. For wet concrete applications all excess or standing water must be displaced and concrete must then dry for a minimum of 60 min prior to sealant installation. Consult Sikaflex Primer Technical Data Sheet or Technical Service for additional information on priming.

APPLICATION METHOD / TOOLS

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.

Sikaflex-1a can be applied on green concrete after the concrete has cured for a minimum of 24 hours at 75°F.Control joints must be cut and open for min of 8 hours prior to application. Expansion joints must have forms removed a minimum of 4 hours prior to application. For damp concrete applications Sikaflex-1a can be applied 60 minutes after any and all water has been displaced.

Tooling & Finishing

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.

Removal

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.

Over Painting

Allow 1-week cure at standard conditions when using Sikaflex-1a in total water immersion situations and prior to painting.

CLEANING OF TOOLS

Clean all tools and application equipment with Xylene immediately after use. Hardened material can only be removed mechanically.

OTHER RESTRICTIONS

See Legal Disclaimer.

LEGAL DISCLAIMER

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

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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 the product’s shelf

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