BUILDING TRUST

PRODUCT DATA SHEET

Sikaflex® SL 2

(formerly MSeal SL 2)

MULTI-COMPONENT SELF-LEVELING POLYURETHANE SEALANT

PRODUCT DESCRIPTION

Sikaflex® SL 2 is a multi-component, self-leveling, elastomeric polyurethane sealant that is mixed and poured in place. When cured, it forms a tough, resilient joint seal that resists penetration and abrasion and remains flexible when exposed to weather and aging.

USES

- Horizontal
- Interior and exterior
- Expansion joints
- Control joints
- Pavers
- Plaza decks
- Industrial floors
- Driveways/garages
- Sidewalks
- Decks
- Parking structures
- Pitch pans

SUBSTRATES

- Concrete
- Metal

CHARACTERISTICS / ADVANTAGES

- Abrasion-resistant to help handle pedestrian and vehicular traffic
- Joint movement capability ±25% provides excellent flexibility for keeping moving joints weathertight
- Weather resistant, producing long-lasting weathertight seals
- Easy to gun and tool, speeding up application and making neater joints
- Sikaflex®-905 accelerator is available for use in cold climate applications to help speed up the initial cure
- No primer is required for most construction materials, lowering installation costs
- The wide temperature-application range makes Sikaflex® SL 2 suitable for all climates
- UL listed; Passes 4-hour, 4-inch, fire and hose stream test when used with Ultra Block or mineral wool
- Suitable for water immersion with documented performance in wet areas
- Chemical cure allows for faster turnaround time
- Bulk packaging results in less waste
- Long pot life offers extended working time
- Formulated to withstand pedestrian and vehicular traffic

APPROVALS / STANDARDS

- ASTM C 920, Type M, Grade P, Class 25, Use T, NT, M, A, O*, and I
- Federal Specification TT-S-00227E, Type I, Class A
- Corps of Engineers CRD-C-506, Type I, Class A
- Canadian Specification CAN/CGSB 19.24-M90, Classification MCG-1-40-B-L, No. 81031
- CFI accepted

  * Refer to substrates in Where to Use.

PRODUCT INFORMATION

Chemical Base	Sikaflex® SL 2 is a multi-component polyurethane that cures by chemical reaction after proper mixing.
Packaging	1.5-gallon units (5.67 L) containing Part A and Part B 3-gallon units (11.34 L) containing Part A and Part B
Shelf Life	Parts A and B: 15 months when properly stored
Storage Conditions	Store in unopened containers in cool, clean, dry area out of direct sunlight. Elevated temperatures will shorten shelf life.
Color	40 standard, stocked colors are available. Refer to the Popular Palette for Sealants and Waterproofing. 463 standard (nonstocked) colors are also available, and custom matching can be done upon request. Refer to the Color Portfolio. Available in pre-tinted colors: Precast gray and limestone ▪ 1.5 gallon (5.67 L) units ▪ 3 gallon (11.34 L) units

TECHNICAL INFORMATION

Shore A Hardness		Self Leveling		Self Leveling (Slope Grade)
	At standard conditions	SL 2: 30		SL 2 SG: 30
	After heat aging (max Shore A: 50)	SL 2: 40		SL 2 SG: 20
Tensile Strength	SL 2: 125psi (.9 MPa)	SL 2 SG: 145 psi (1.0 MPa)	(ASTM D 412)	
Elongation	SL 2: 240%	SL 2 SG: 225%	(ASTM D 412)	
Movement Capability	±25	(ASTM C 719)		
	Bond durability on concrete ±25% movement	Passes	(ASTM C 719)	
Adhesion in peel	On concrete	Passes	(ASTM C 794)	
Shrinkage	Nil			
Service Temperature	-40 to 180°F (-40 to 82°C)			
Thermal Resistance	Weight loss after heat aging	5%	(ASTM C 792)	
	Cracking and chalking after heat aging	None	(ASTM C 792)	
Contact with water	122°F (50°C)	Passes 10 weeks with movement cycling	(ASTM C 1247)	
Resistance to Weathering	Low-temperature flexibility -15°F (-26°C)	Passes	(ASTM C 793)	
	Xenon arc, 250 hours	Passes	(ASTM C 793)	
	Xenon arc, 2,000 hours	No surface cracking	(ASTM G 26)	
Color	No visible stain			(ASTM C 510)
Joint Design	**Joint Width and Sealant Depth**			

Joint Width IN (MM)	**Sealant Depth At midpoint, IN (MM)**
¼–½ (6–13)	¼ (6)
½–¾ (13–19)	¼–3⁄8 (6–10)
¾–1 (19–25)	3⁄8–½ (10–13)
1–3 (25–75)	½ (13)

Extrusion rate	Passes	(ASTM C 603)	

APPLICATION INFORMATION

Coverage

Linear Feet per Gallon

Joint Width(In)		Joint Depth(In)	
	1/4	3/8	1/2
1/4	308	-	-
3/8	205	-	-
1/2	154	-	-
5/8	122	82	-
3/4	-	68	51
7/8	-	58	44
1	-	51	38
3/2	-	-	26
2	-	-	19
3	-	-	12

Meters per Liter

Joint Width (MM)		Joint Depth(MM)	
	6	10	13
6	24.8		
10	16.5		
13	12.4		
16	9.8	6.6	
19		5.5	4.1
22		4.7	3.5
25		4.1	3.0
38			2.2
50			1.5
75			.7

Flowability

SL 2: Self-leveling 40°F (4°C) (ASTM C 639)

Pot Life

Working Times

	Standard Conditions 73 °F (23 °C)	**Cooler Temperatures 40 °F (4 °C)**
No accelerator	1½ – 2 hrs	4½ – 5½ hrs
1–2 accelerator	30 – 45 min	1½ – 2 hrs
3 accelerators	-	45 min – 1 hr

Tack Free Time

< 24 hrs, Maximum 72 hrs (ASTM C 679)

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.

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

- Do not allow Sikaflex® SL 2 sealants to come into contact with alcohol-based materials or solvents.
- Do not apply polyurethane sealants in the vicinity of uncured silicone sealants or uncured Sikaflex® HY 150.
- When Sikaflex® SL 2 is to be used in areas subject to continuous water immersion, cure for 14 days at 70 °F (23 °C). Allow longer cure time at lower temperatures. Always use Sika® Primer-173.
- Do not use it 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 (58 °C).
- For slopes up to 12% use Sikaflex® SL 2 Slope Grade. For slopes over 12% use Sikaflex® NP 2 sealant.
- Backer rods, joint fillers, or bond breakers must be tight to the sides of the joint to prevent loss of sealant through the bottom.
- For joints subject to puncture by high heels or umbrella points, a stiffer or higher-density backup material is required. Cork or rigid non-impregnated cane-fiber joint fillers are suitable. Separate materials from the sealant by a non-adhering bond breaker (polyethylene tape).
- Do not use other caulks or sand as a bottom bed in a joint.
- Do not install when rain is expected before the sealant reaches the initial cure (about 12 hours).
- Units of Sikaflex® SL 2 are premeasured; do not use partial units.
- Sikaflex® SL 2 may yellow in the presence of unvented artificial heat; this is a surface phenomenon that does not affect sealant performance.
- Use only Sikaflex®-900 color packs intended for use with Sikaflex® SL 2.
- Proper application is the responsibility of the user. Field visits by Sika personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the job site.

NOTES ON INSTALLATION

SUBSTRATE PREPARATION

Joints must be clean and dry. Joint surfaces must be structurally sound, fully cured, and free of all loose aggregate, paint, oil, grease, asphalt, wax, mastic compounds, waterproofing compounds, form-release materials, curing compounds, or any other contaminants.

New Concrete

Remove all loose material from joints by wire brushing. Sandblast surfaces in contact with form-release agents. Fresh concrete must be fully cured. Laitance must be removed by abrading.

Old Concrete

For previously sealed joints, remove all old material by mechanical means. If joint surfaces have absorbed oils, remove sufficient concrete to ensure a clean surface.

Priming

1. For most applications, priming is not required; joints subject to periodic water immersion, however, must be primed with Sika® Primer-173. On surfaces other than concrete, conduct a test application to verify adhesion.
2. Apply primer in a thin, uniform film. Avoid buildup of excess primer.
3. Avoid applying primer beyond joint faces. To minimize the contamination of adjacent surfaces, apply masking tape before priming and remove before the sealant has begun to thicken and set.
4. Allow approximately 15 – 30 minutes drying time before applying sealant (primer should be tack-free). Priming and sealing must be done on the same day.

MIXING

1. Sikaflex® SL 2 is a multi-component system with a configuration of Part A, Part B, and sometimes a color pack.
2. Part B comes in a pouch and is usually squeezed into the resin.
3. Part B must be mixed thoroughly with Part A. Before adding pigment, scrape the sides of the container to ensure the complete mixing of Parts A and B. With a slow-speed drill and a sealant mixing paddle, mix for 4–6 minutes. Keep the paddle blade below the surface of the sealant to avoid whipping air into the sealant.
4. Transfer the entire contents of one Sikaflex®-900 color pack pigment can into the mixed Part A and B. Use a spatula or knife to remove all the pigment from the container. Continue mixing with a slow-speed drill and slotted paddle until the color is uniform. During the process, scrape the sides and bottom of the mixing container several times to obtain a complete mix.
5. 3-gallon (11.37 L) unit: Use 2 Part B and 2 pigment containers for each Part A container. Mix as instructed under a 3/2 gallon (5.7 L) unit.
6. The pot life of mixed Sikaflex® SL 2 is influenced by temperature. See Pot Life for specific data. Sikaflex®-905 accelerator may be added to adjust the initial cure rate.

APPLICATION METHOD / TOOLS

1. The product may be used in sealant joints designed in accordance with SWR Institute's Sealants - The Professional's Guide.
2. In optimal conditions, the depth of the sealant should be ½ the width of the joint. The sealant joint depth (measured at the center) should always fall between the maximum depth of ½" and the minimum depth of ¼". Refer to Joint Design.
3. In deep joints, the sealant depth must be controlled by

a closed-cell backer rod or soft backer rod. Where the joint depth does not permit the use of a backer rod, a bond breaker (polyethylene strip) must be used to prevent three-point bonding.
4. To maintain the recommended sealant depth, install the backer rod by compressing and rolling it into the joint channel without stretching it lengthwise. Closed cell backer rod should be about 1⁄8" (3 mm) larger in diameter than the width of the joint to allow for compression. The soft backer rod should be approximately 25% larger in diameter than the joint width. The sealant does not adhere to it, and no separate bond breaker is required. Do not prime or puncture the backer rod.

APPLICATION

1. All caulking and sealing should be performed when temperatures are above 40 °F (4 °C); any moisture or frost on surfaces will adversely affect adhesion.
2. Fill joints from the bottom; avoid bridging the joint, which may form air voids.
3. For large joints, the self-leveling grade may be poured directly from the can.
4. For smaller joints and all slope-grade applications, fill the joint by flowing the sealant from a bulk-loading gun.
5. Light tooling of the slope-grade sealant is recommended to smooth out ripples. On sloped surfaces, tool from the lowest point to the highest. Do not use soap or solvent.

Curing

Cure time will vary with humidity and temperature. Initial cure is within 24 hours and complete cure takes approximately 7 days. Allow 14-day cure at 70 °F (23 °C) before water immersion. Cure rates are dependent on temperature and humidity. Protect joint from dirt and traffic until cured. See Pot Life for the use of the Sikaflex®-905 accelerator.

CLEANING OF TOOLS

1. Immediately after use and before the sealant has cured, clean equipment with SikaSwell®-990 or xylene.
2. The cured sealant may be removed by cutting with a sharp-edged tool. Remove thin films by abrading.

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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