BUILDING TRUST

PRODUCT DATA SHEET

Sikaflex® SL 1

(formerly MSeal SL 1)

ONE-COMPONENT ELASTOMERIC, SELF-LEVELING POLYURETHANE SEALANT

PRODUCT DESCRIPTION

Sikaflex® SL 1 is one component, non-priming, self-leveling elastomeric polyurethane designed for expansion joints in concrete floors and decks. Use it where flexibility as well as abrasion and puncture resistance are required.

USES

Applications
- 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

- Movement capability of ±35% allows expansion and contraction with joint movement
- Abrasion-resistant to provide for longer wearing and durability
- Easy to gun for quick installation
- Variety of types and sizes of packaging to help reduce jobsite waste
- No priming is needed on most surfaces, offering excellent adhesion
- Self-leveling, so no tooling is needed
- Wide application temperature range makes Sikaflex® SL 1 suitable for all climates
- Excellent weatherability for long-lasting performance

APPROVALS / STANDARDS

- ASTM C 920, Type S, Grade P, Class 35
- Use T, M, NT, A and O*
- Federal Specification TTS- 00230C, Type 1, Class A
- Corps of Engineers CRD-C-541
- Canadian Specification CAN/CGSB 19.13-M87
- Classification C-1-40-B-N and C-1-25-B-N, No. 81028
- CFI accepted

* Refer to substrates in Where to Use.

PRODUCT INFORMATION

Chemical Base	Sikaflex® SL 1 is a single-component polyurethane sealant, which cures by reaction with atmospheric moisture.
Packaging	▪ 5 gallon pails (18.9 L) ▪ 2 gallon pails (7.6 L) ▪ 825 ml cartridges:12 cartridges per carton ▪ 300 ml cartridges: 30 cartridges per carton and 12 cartridges per carton

Shelf Life	In Bulk: 6 months when properly stored Cartridges: 1 year when properly stored	
Storage Conditions	Store in unopened containers in a cool, clean, dry area. Storing at elevated temperatures will reduce shelf life.	
Color	Limestone and Gray (only available in 825 ml cartridges)	
Viscosity	325 Poise	(Brookfield)

TECHNICAL INFORMATION

Shore A Hardness	25	(ASTM C 661)
Tensile Strength	300psi (2.1MPa)	(ASTM D 412)
Elongation	800%	(ASTM D 412)
Movement Capability	±35%	(ASTM C 719)
Shrinkage	Nil	
Service Temperature	-40 to 180°F (-40 to 82°C)	
Thermal Resistance	**Low-temperature flexibility** -15°F (-26°C)	(ASTM C 793)

Resistance to Weathering	Excellent, Xenon arc, 1,000 hrs	ASTM G 26

Joint width

Table 1

Joint Width in (mm)	Sealant Depth at Midpoint
¼–½ (6–13)	¼ (6)
½–¾ (13–19)	¼–3⁄8 (6–10)
¾–1 (19–25)	3⁄8–½ (10–13)
1–1½ (25–38)	½ (13)

APPLICATION INFORMATION

Coverage

Linear Feet per Gallon

Joint Width, in		Joint Depth, in	
	¼	3⁄8	½
¼	308		
3⁄8	205		
½	154		
5⁄8	122	82	
¾		68	51
7⁄8		58	44
1		51	38
1½			26
2			19
3			12

Meters per Liter

Joint Width, mm		Joint Depth, mm	
	6	10	13
6	24.8		
10	16.5		
13	16.5		
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
70			0.7

Linear Feet per 825 ml Cartridge

Joint Width, in		Joint Depth, in	
	¼	3⁄8	½
¼	72		
3⁄8	48		
½	36		
5⁄8	28.5	19.25	
¾		16	12
7⁄8		13.5	10.2
1		12	8.8

Linear Meter per 825 ml Cartridge

Joint Width, mm		Joint Depth, mm	
	6	10	13
¼	20.5		
3⁄8	13.6		
½	10.2		
5⁄8	8.1	5.4	
¾		4.5	3.4
7⁄8		3.9	2.9
1		3.4	2.5

Cure Time

The cure of Sikaflex® SL 1 varies with temperature and humidity. The following times assume 75 °F (24 °C), 50% relative humidity, and a joint 1/2" width by ¼" depth (13 by 6 mm).

- Skins: overnight or within 24 hours
- Full cure: approximately 1 week

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

NOTES ON INSTALLATION

- Do not allow uncured Sikaflex® SL 1 to come into contact with alcohol-based materials or solvents.
- Do not apply polyurethane sealants in the vicinity of uncured silicone or hybrid sealants.
- Sikaflex® SL 1 is not intended for continuous water immersion. Contact Technical Service for recommendations.
- Backer rods, joint fillers, and bond breakers must be tightly installed to prevent loss of sealant through joint bottoms.
- Joints subject to puncture by high heels or umbrella

points require a stiffer or higher-density backup material; cork or rigid nonimpregnated cane-fiber joint fillers are suitable. Separate materials from the sealant by a nonadhering bond breaker (polyethylene tape).
- High temperatures or humidity may cause uncured material to bubble.
- The sealant may bubble if the substrates are not dry or if the material is applied too deep.
- Do not use other caulks, sand, or incompressibles as a bottom bed in a joint.
- Do not install when rain is expected before the sealant develops a substantial skin.
- For joint widths over 1-1/2" (38 mm), use 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.

SUBSTRATE PREPARATION

Joint Preparation

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
3. always fall between the maximum depth of ½" and the minimum depth of ¼". Refer to Yield section. 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.

Surface Preparation.

Substrates must be structurally sound, fully cured, dry, and clean. Substrates should always be free of the following: dirt, loose particles, oil, grease, asphalt, tar, paint, wax, rust, waterproofing or curing and parting compounds, membrane materials, and sealant residue.

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 the 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 of drying time before applying sealant (primer should be tack-free). Priming and sealing must be done on the same day.

APPLICATION

- Fill joints by pouring the sealant from a spouted container.
- Fill joints from the bottom; avoid bridging of the joint, which may form air voids. The sealant will self-level to form a clean joint surface.

CLEANING OF TOOLS

Clean equipment with SikaSwell®-990 or xylene immediately after use and before the sealant has cured. Cured sealant may be removed by
cutting with a sharp-edged tool, 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**

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates (“SIKA”), the user must always read and follow the warnings and instructions on the product’s most current product label, Product Data Sheet and Safety Data Sheet which are available at

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