BUILDING TRUST
CONSTRUIRE LA CONFIANCE

PRODUCT DATA SHEET

Sikaflex® SL 1

(formerly MSeal SL 1)

One-component, elastomeric, self-levelling polyurethane sealant

PRODUCT DESCRIPTION

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

WHERE TO USE

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-levelling, no tooling is needed
- Wide application temperature range making Sikaflex® SL 1 suitable for all climates
- Excellent weatherability for long-lasting performance

APPROVALS / CERTIFICATES

- ASTM C920, 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
- CFIA accepted

* Refer to substrates in Where to Use.

PRODUCT INFORMATION

Composition / Manufacturing	One-component polyurethane curing by reaction with atmospheric humidity.
Packaging	▪ 18.9 L (5 US gal.) pails ▪ 7.6 L (2 US gal.) pails ▪ 825 mL cartridges (12 cartridges/carton) ▪ 300 mL cartridges (30 cartridges/carton and 12 cartridges/carton)

Colour	Limestone and Grey (only available in 825 mL cartridges)
Shelf Life	▪ Pails: 6 months when properly stored in original, unopened packaging. ▪ Cartridges: 1 year when properly stored in original, unopened packaging.
Storage Conditions	Store in unopened containers in a cool, clean, dry area. **Note:** Storing at elevated temperatures will reduce shelf life.
Viscosity	325 Poise (Brookfield)
CSC MasterFormat®	**07 92 13 | ELASTOMERIC JOINT SEALANTS**

TECHNICAL INFORMATION

Shore A Hardness	25	(ASTM C661)
Tensile Strength	2.1 MPa (300 psi)	(ASTM D412)
Elongation	800 %	(ASTM D412)
Shrinkage	Nil	
Movement Capability	± 35 %	(ASTM C719)
Temperature Resistance	**Low-temperature flexibility** -26 °C (-15 °F)	(ASTM C793)
Resistance to Weathering	Excellent, Xenon arc, 1000 hours	ASTM G26
Service Temperature	-40 °C to 82 °C (-40 °F to 180 °F)	

Joint width

Table 1

Joint width mm (in)	Sealant depth at mid-point
6–13 (¼–½)	6 (¼)
13–19 (½–¾)	6–10 (¼–3⁄8)
19–25 (¾–1)	10–13 (3⁄8–½)
25–38 (1–1½)	13 (½)

APPLICATION INFORMATION

Yield

Linear feet per US gal.

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

Linear meters per Litre

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 meters 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

Curing Time

The cure of Sikaflex® SL 1 varies with temperature and humidity. The following times assume 24 °C (75 °F) with 50 % RH, and a joint 13 mm x 6 mm (1/2 in width x 1/4 in depth) .

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

BASIS OF PRODUCT DATA

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.

LIMITATIONS

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.

- 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 Sika Canada Technical Services 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 non-impregnated cane-fibre joint fillers are suitable. Separate materials from the sealant by a non-adhering 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 exceeding 38 mm (1-1/2 in), use Sikaflex® SL 2.

ENVIRONMENT, HEALTH & SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

Joint preparation
The product may be used in sealant joints designed in accordance with SWR Institute's Sealants - The Professional's Guide. 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 13 mm (½ in) and the minimum depth of 6 mm (¼ in). 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. 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 3 mm (1⁄8 in) 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
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. Apply primer in a thin, uniform film. Avoid the buildup of excess primer. 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. 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.

CLEAN UP

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 NOTES

The information, and in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika’s current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local

Product Data Sheet for the product concerned, copies of which will be supplied on request or may be downloaded from our website at: www.sika.ca

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