



PRODUCT DATA SHEET

Sikaflex®-1c SL

HIGH PERFORMANCE, SELF-LEVELLING ONE-PART POLYURETHANE SEALANT

PRODUCT DESCRIPTION

Sikaflex®-1c SL is a single-component, self-levelling, premium-grade polyurethane sealant with accelerated curing capacity.

WHERE TO USE

Sikaflex®-1c SL is used to seal horizontal movement joints in concrete and cementitious substrates such as:

- Driveways and garage floors
- Sidewalks and pavements
- Balcony decks
- Civil structures
- Terrace decks
- Pedestrian plazas
- Warehouse and factory floors

CHARACTERISTICS / ADVANTAGES

- Capable of $\pm 25\%$ joint movement
- Convenient, easy-to-use packaging
- 1-component, no mixing required
- Self-levelling, pourable consistency
- Accelerated curing
- Can be applied to green concrete 24 hours after pour
- Can be applied to damp concrete 1 hour after getting wet
- Resists aging and weathering
- Jet fuel resistant
- Meets Federal Specification TT-S-00230C, Type 1, Class A.
- Meets ASTM C920, Type S, Grade P, Class 25, use T, M, A, G, I.
- Ministry of Transport Quebec (MTQ) Acceptance

ENVIRONMENTAL INFORMATION

- Conformity with LEED®v4 EQ Credit: Low-Emitting Materials
- Conformity with LEED®v4 MR Credit (Option 2): Building Product Disclosure and Optimization - Material Ingredients
- Conformity with LEED®v4 MR Credit (Option 2): Building Product Disclosure and Optimization - Sourcing of Raw Materials

PRODUCT INFORMATION

CSC MasterFormat®

Packaging 300 mL (10.1 US fl. oz) moisture-proof composite cartridge, 24/case.
858 mL (29 US fl. oz) moisture-proof composite cartridge, 12/case.

Colour Limestone

Shelf Life	1 year in original unopened packaging (cartridge).
Storage Conditions	Store between 4 and 35 °C (39 and 95 °F). Condition product between 18 and 24 °C (65 and 75 °F) before using.
Volatile organic compound (VOC) content	< 45 g/L

TECHNICAL INFORMATION

Shore A Hardness	40 ± 5	(ASTM D2240) 21 days												
Tensile Strength	1.03 MPa (150 psi)	(ASTM D412) 21 days												
Tensile Stress at Specified Elongation	0.76 MPa (110 psi) at 100 %	(21 days at 23 °C (73 °F) and 50 % R.H.) (ASTM D-412)												
Modulus of Elasticity in Tension	0.76 MPa (110 psi)	(ASTM D412) 21 days												
Elastic Recovery	>90 %													
Elongation at Break	320%	(ASTM D412) 21 days												
Adhesion in Peel	<table border="1"> <thead> <tr> <th>Substrate</th> <th>Peel Strength</th> <th>Adhesion loss</th> </tr> </thead> <tbody> <tr> <td>Mortar</td> <td>> 4.9 N/mm (28 lb/in)</td> <td>0 %</td> </tr> <tr> <td>Aluminium</td> <td>> 5.25 N/mm (30 lb/in)</td> <td>0 %</td> </tr> <tr> <td>Glass</td> <td>> 6.48 N/mm (37 lb/in)</td> <td>0 %</td> </tr> </tbody> </table>	Substrate	Peel Strength	Adhesion loss	Mortar	> 4.9 N/mm (28 lb/in)	0 %	Aluminium	> 5.25 N/mm (30 lb/in)	0 %	Glass	> 6.48 N/mm (37 lb/in)	0 %	(23 °C (73 °F) and 50 % R.H.) (ASTM C794)
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Movement Capability	±25 %	(23 °C (73 °F) and 50 % R.H.) (ASTM C-719)												
Chemical Resistance	Consult Sika Canada													
Resistance to Weathering	Excellent													
Service Temperature	-40 to 77 °C (-40 to 170 °F)													

APPLICATION INFORMATION

Yield	300 mL (10.1 US fl. oz) cartridge seals 3.7 m (12 ft) of 12.7 mm (1/2 in) x 6.35 mm (1/4 in) joint. 858 mL (29 US fl. oz) cartridge seals 11 m (36 ft) of 12.7 mm (1/2 in) x 6.35 mm (1/4 in) joint.
Ambient Air Temperature	4 to 38 °C (39 to 100 °F)
Substrate Temperature	4 to 38 °C (39 to 100 °F)
Curing Rate	Tack-free Time: 1 to 2 hours Final Cure: 3 to 5 days

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. Properties tested at 23 °C (73 °F) and 50 % R.H. unless stated otherwise.

LIMITATIONS

- The ultimate performance of Sikaflex®-1c SL depends on good joint design, correct joint preparation and proper application.
- Some substrates require priming. Please refer to the Sikaflex® Primers Product Data Sheet or contact Sika Canada.
- Although applying sealants over paints, sealers or coatings is not recommended within the industry, where it cannot be avoided, it is always necessary to test for adhesion. It should also be recognized that the existing paint, sealer or coating will dictate bond values and possibly the integrity of a subsequently applied sealant and thus the performance of the joint.
- Do not apply when joint walls are wet or damp and a moisture-vapour-transmission condition exists from the substrate as this can cause bubbling within the sealant.
- Maximum depth of sealant must not exceed 13 mm (1/2 in); minimum depth is 6 mm (1/4 in).
- The depth of sealant in horizontal joints subject to traffic is 13 mm (1/2 in).
- Maximum expansion and contraction should not exceed 25 % of average joint width.
- Use opened cartridges the same day.
- When applying sealant, avoid air-entrapment.
- Do not tool with detergent or soap solutions.
- Since the material is moisture-cured, permit sufficient exposure to air.
- Avoid contact with materials or surfaces impregnated with, or containing, oil, asphalt, tar or bituminous substances.
- Do not apply or cure in the presence of uncured silicone sealants, alcohol and other solvent cleaners.
- Allow at least seven (7) days for sealant to cure under stated conditions when using Sikaflex®-1c SL in total water immersion situations or prior to painting.
- When over-coating with water-, oil- and rubber-based paints, compatibility and adhesion tests are essential.
- Avoid exposure to high levels of chlorine (maximum continuous level is 5 ppm of chlorine.)

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

All joint surfaces must be clean, sound, dry and frost-free. Joint walls must be free of oils, tar, asphalt, bitumen, grease, paints, coatings, sealers, curing compound residues, and any other foreign matter that might prevent adhesion. Ideally this should be

accomplished by suitable mechanical methods. Install bond breaker tape to the bottom of the joint or compressible backer rod into the joint to prevent bond to surfaces other than the joint walls.

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 Product Data Sheet or contact Sika Canada for information regarding priming.

APPLICATION METHOD / TOOLS

Recommended application temperatures: 4 to 38 °C (39 to 100 °F). Sealant should be pre-conditioned to approximately 21 °C (70 °F) when working at extremes of temperature. For best performance Sikaflex®-1c SL should be applied into the joint when the joint is at mid-point of its designed expansion and contraction. Cut plastic nozzle on cartridge to desired joint size and puncture airtight seal at base of nozzle. Place cartridge in suitable sized caulking gun, place nozzle at the bottom of the joint and apply sealant into joint slot. Work in one direction and allow sealant to steadily flow and level out as necessary. Tool as required, although minimum tooling is necessary. Joint dimensioning should allow for 6 mm (1/4 in) minimum and 13 mm (1/2 in) maximum depth of sealant. Proper design is 2:1 width to depth ratio for movement joints. Always use bond breaker tape or closed cell backer rod for support on horizontal joints.

Linear metre of Sealant per Litre

Width/Depth	6 (¼)	13 (½)	19 (¾)	25 (1)
6 (¼)	24.8			
13 (½)	12.2	6.2		
19 (¾)	8.3	4.1	2.8	
25 (1)	6.2	3.1	2.1	1.6
32 (1¼)	5.0	2.5	1.7	1.2
38 (1½)	4.1	2.1	1.4	1.0

CLEAN UP

Uncured material can be removed from equipment and tools using Sika® Urethane Thinner and Cleaner. Cured material can only be removed manually or mechanically.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

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

Product Data Sheet

Sikaflex®-1c SL

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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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