BUILDING TRUST

PRODUCT DATA SHEET

Sikaflex®-1c SL

HIGH PERFORMANCE, SELF-LEVELING, ONE-PART POLYURETHANE SEALANT

PRODUCT DESCRIPTION

Sikaflex®-1c SL is a single component, self-leveling, premium-grade polyurethane sealant with an accelerated curing capacity. Meets Federal Specification TT-S-00230C, Type I, Class A. Meets ASTM C-920, Type S, Grade P, Class 25, use T, M, A, G, I.

USES

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

- Sidewalks
- Balconies
- Pavements
- Terraces
- Warehouses
- Factories
- Civil Structures
- Plazas
- Pitch Pans
- Canals and Water Treatment

CHARACTERISTICS / ADVANTAGES

- 1-component, no mixing
- Self-leveling, pourable
- Accelerated curing
- Can be applied to green concrete 24 hours after pour
- Can be applied to damp concrete 1 hour after getting wet
- Extremely elastic
- High durability
- Resists aging, weathering
- Excellent adhesion
- Convenient, easy-to-use packaging
- Jet fuel resistant
- Water Immersion Applications

PRODUCT INFORMATION

Packaging	10.1 fl. oz. moisture-proof composite cartridges, 24/case. 29 oz. moisture-proof composite cartridges,12/case. 5 gallon pails. (filled to 5 gal.) 50 gallon drums.
Color	Limestone
Shelf Life	10.1 oz. & 29 oz. cartridge: 1 year in original unopened packaging. 5 gallon pail & 50 gallon drum: 6 months in original unopened packaging.
Storage Conditions	Store at 40–95 °F (4–35 °C). Condition material to 65–75 °F before using.

Volatile organic compound (VOC) content See Product Safety Data Sheet

TECHNICAL INFORMATION

Shore A Hardness	40 ± 5	(21 days at 73 °F (23 °C) and 50 % R.H.) (ASTM D-2240)
Tensile Strength	150 psi	(21 days at 73 °F (23 °C) and 50 % R.H.) (ASTM D-412)
Tensile stress at specified elongation	110 psi at 100 %	(21 days at 73 °F (23 °C) and 50 % R.H.) (ASTM D-412)
Elastic Recovery	>90 %	(73 °F (23 °C) and 50 % R.H.) (ASTM C-719)
Elongation at Break	320 %	(21 days at 73 °F (23 °C) and 50 % R.H.) (ASTM D-412)

Adhesion in peel (73 °F (23 °C) and 50 % R.H.) (ASTM C-794)

Substrate	Peel Strength	Adhesion loss
Concrete	> 28 lbs.	0 %
Aluminum	> 30 lbs.	0 %
Glass	> 37 lbs.	0 %

Movement Capability	±25 %	(73 °F (23 °C) and 50 % R.H.) (ASTM C-719)
Resistance to Weathering	Excellent	
Service Temperature	-40 °F (-40 °C) to 170 °F (77 °C)	

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

29 oz Cartridge: Yield in Linear feet

Width/Depth	1/4"	3/8"	1/2"
1/4"	69.8		
3/8"	46.5	31.0	
1/2"	34.9	23.3	17.4
3/4"	23.3	15.5	11.6
1"			8.7
1.25"			7.0
1.5"			5.8

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

Ambient Air Temperature 40–100 °F. Sealant should be installed when joint is at mid-range of its

	anticipated movement.	
Substrate Temperature	40–100 °F. Sealant should be installed when joint is at mid-range of its anticipated movement.	
Curing Rate	**Tack-free Time**: 1 to 2 hours **Final Cure**: 3 to 5 days	(73 °F (23 °C) and 50% R.H.) (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.

LIMITATIONS

- Primer is required if sealant will be subjected to total water immersion.
- Allow 1 week cure at standard conditions when using Sikaflex®-1c SL in total water immersion situations.
- When overcoating with water, oil and rubber-based paints, compatibility and adhesion testing is essential.
- Rigid paints, coatings, or primers will crack over elastomeric sealant experiencing expansion or contraction.
- Maximum exposure level of chlorine is 5 ppm.
- In joints subject to movement - maximum depth of sealant must not exceed 1/2 in.; minimum depth is 1/4 in.
- Minimum depth of sealant for horizontal joints subject to traffic is 1/2 in.
- Maximum expansion and contraction should not exceed 25 % 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 cartridges the same day.
- The ultimate performance of Sikaflex®-1c SL depends on good joint design and proper application with joint surfaces properly prepared.
- 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

Clean all surfaces. Joint walls must be sound, clean,dry, frost-free, and free of oil and grease. Curing compound residues and any other foreign matter must be thoroughly removed. A mechanically roughened surface will also enhance bond. Sikaflex®-1c SL can be applied in green concrete after the concrete has cured for a minimum of 24 hours at 75°F. (23°C). For green concrete applications in control joints the concrete must be cut 8 hours (min.) prior to sealant installation and in expansion joint the forms must be removed 6 hours (min.) 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. Install bond breaker tape or backer rod to prevent bond at base of joint. If sealant will be used in immersion service then priming is required - when using primer, green and damp concrete conditions should be avoided.

APPLICATION METHOD / TOOLS

Recommended application temperatures: 40–100 °F. Preconditioning sealant to approximately 70 °F is necessary when working at extremes. For best performance, Sikaflex®-1c SL should be poured into joint when joint slot is at mid-point of its designed expansion and contraction. Pour sealant into joint slot in one direction and allow sealant to flow and level out as necessary. Tool as required, although minimum tooling is necessary. 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. Always use bond breaker tape or closed cell backer rod for support on horizontal joints.
Sikaflex®-1c SL can be applied in 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-1c SL can be applied 60 minutes after any and all water has been displaced.

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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