

Product Data Sheet

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Sikaflex-1c SL

Sikaflex® -1c SL

High performance, self-leveling, 1-part polyurethane sealant

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.
Where to Use	Sikaflex-1c SL is used to seal horizontal expansion joints in concrete and cementitious slabs such as: <ul style="list-style-type: none"> ■ Sidewalks ■ Balconies ■ Pavements ■ Terraces ■ Warehouses ■ Factories ■ Civil Structures ■ Plazas ■ Pitch Pans ■ Canals and Water Treatment
Advantages	<ul style="list-style-type: none"> ■ 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
Packaging	10.1 fl. oz. moisture-proof composite cartridges, 24/case. 29 oz. moisture-proof composite cartridges, 12/case. 4.5 gallon pails. 50 gallon drums.

Typical Data (Material and curing conditions 73°F (23°C) and 50% R.H.)

RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.

Shelf Life:	10.1 oz. cartridge 1 year in original unopened packaging. 29 oz. cartridge 1 year in original unopened packaging. 4.5 gallon pail 6 months. 50 gallon drum 6 months.
Storage Conditions:	Store at 40°-95°F (4°-35°C). Condition material to 65°-75°F before using.
Color:	Limestone
VOC Content:	40 g/l
Application Temperature:	40°-100°F. Sealant should be installed when joint is at mid-range of its anticipated movement.
Service Range:	-40° to 170°F.
Curing Rate Tack-free Time:	1 to 2 hours. Final Cure: 3 to 5 days
Recovery:	>90%
Shore 'A' Hardness (ASTM D-2240):	21 Day 40 ± 5
Tensile Properties (ASTM D-412):	
21 Day Tensile Strength:	150 psi
Elongation @ Break:	320%
Stress @ 100%:	110 psi
Adhesion in Peel (ASTM C-794):	
Substrate Peel Strength Adhesion:	
Mortar > 28 lbs.	0% Adhesion Loss
Aluminum > 30 lbs.	0% Adhesion Loss
Glass > 37 lbs.	0% Adhesion Loss
Joint Movement:	± 25%
Weathering Resistance:	Excellent



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Coverage

10.1 oz Cartridge: Yield in Linear feet				
Depth	1/4"	3/8"	1/2"	
Width	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				
Depth	1/4"	3/8"	1/2"	
Width	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				
Depth	1/4"	3/8"	1/2"	
Width	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

How to Use

Surface Preparation

Surface 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. For green concrete applications control joints must be cut 8 hours (min.) prior to sealant installation and expansion joint forms must be removed 4 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.

Priming

Priming is not usually necessary. Substrates only require priming if testing indicates a need or where sealant will be subjected to water immersion after cure. Consult Sikaflex Primer Technical Data Sheet or Technical Service for additional information on priming.

Application

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.

Limitations

- 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.
- 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.

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