BUILDING TRUST
CONSTRUIRE LA CONFIANCE

PRODUCT DATA SHEET
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ELASTOMERIC JOINT SEALANTS

Sikaflex®-2c SL

TWO-COMPONENT, SELF-LEVELLING, POLYURETHANE ELASTOMERIC SEALANT

Description

Sikaflex®-2c SL is a two-component, premium-grade, polyurethane-based, elastomeric sealant. It is principally a chemical cure in a self-levelling consistency.

Where to Use

- Intended for use in all properly designed working joints with a minimum depth of 6 mm (1/4 in).
- Ideal for horizontal applications.
- Can be applied at temperatures as low as 4 °C (39 °F).
- Adheres to most substrates commonly found in construction.
- Submerged conditions, such as canal and reservoir joints.
- Ideal for vehicle traffic joints.

Advantages

- Capable of ± 50 % joint movement.
- True self-levelling properties.
- Chemical cure allows the sealant to be placed in joints exceeding 13 mm (1/2 in) in depth.
- High elasticity with a tough, durable, flexible consistency.
- Exceptional cut and tear resistance.
- Exceptional adhesion to most substrates without priming.
- Available in 40 architectural colours.
- Colour uniformity assured via Color-pak system.
- Available in pre-pigmented Limestone Grey (no Color-pak needed).
- Self-levelling consistency, easy to apply in horizontal joints.
- Easy to mix.
- Paintable with water, oil, and rubber-base paints.
- Jet fuel resistant.
- USDA approved.
- Booster pak available for faster cure in cold weather.
- Meets ASTM C920, Type M, Grade P, Class 25, use T, NT, M, G, A, O, I.
- Meets Federal Specification TT-S-00227E, Type I, Class A.
- Meets Federal Specification TT-S-001543A
- Meets Federal Specification TT-S-00230C
- Meets CAN/CGSB 19.24-M90.
- Canadian Food Inspection Agency acceptance.
- Ministère des Transports du Québec acceptance.

Technical Data

Packaging
5.7 and 17.1 L units (1.5 and 4.5 US gal. units).
Color-pak and Sikaflex®-2c Booster sold separately.

Colours
A wide range of architectural colours are available. Special colours available on request.

Yield
Linear metre of Sealant per Litre

Width	Depth					
mm (in)	6 (¼)	13 (½)	19 (¾)	25 (1)	32 (1¼)	38 (1½)
6 (¼)	24.8					
13 (½)	12.4	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	1.0	
38 (1½)	4.1	2.1	1.4	1.0	0.8	0.7

Shelf Life
1 year in original, unopened packaging. Store dry at temperatures between 4 and 35 °C (39 and 95 °F). Condition product between 18 and 24 °C (65 and 75 °F) before using.

Properties at 23 °C (73 °F) and 50 % R.H.

Application Temperature
4 to 38 °C (39 to 100 °F), ambient and substrate temperatures. Sealant should be installed when joint is at mid-range of its anticipated movement.

Service Range
-40 to 77 °C (-40 to 170 °F)

Curing Rate ASTM C679
Tack-free time 6 - 8 hours
Final cure 3 days

Working Time 5.7 L (1.5 US gal.) unit	**4 °C (39 °F)**	**23 °C (73 °F)**	**29 °C (85 °F)**
Sikaflex®-2c SL	8 - 10 h	2 h	1 h 30 min
With 1 cold weather Booster	5 h 30 min	1 h 30 min	1 h
With 2 cold weather Boosters	5 h 30 min	1 h 30 min	1 h
Tear Strength ASTM D624	17.5 N/mm (100 lb/in)		
Shore A Hardness ASTM D2240	40 ± 5		
Tensile Properties ASTM D412			
Tensile strength at break	1.2 MPa (175 psi)		
Tensile elongation	650 %		
100 % Modulus	0.69 MPa (100 psi)		
Adhesion in Peel (Fed Spec. TT-S-00227E)			
Substrate	Peel Strength	% Adhesion Loss	
Concrete	5.3 N/mm (30 lb/in)	Zero	
Weathering Resistance	Excellent		
VOC Content	75 g/L		
Chemical Resistance	Good resistance to water, diluted acids, diluted alkalines, and residential sewage. Consult Sika Canada's Technical Service for specific 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.

HOW TO USE

Surface 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 mechanical means. Bond breaker tape or backer rod must be used in bottom of joint to prevent bond.

Priming

Priming is typically not necessary. Most substrates only require priming if sealant will be subjected to water immersion after cure. Testing should be done, however, on questionable substrates, to determine if priming is needed. Contact Sika Canada or consult Sikaflex® Primers Product Data Sheet for additional information on priming.

Mixing

Pour entire contents of Component B into pail of Component A. Add entire contents of Color-pak into pail and mix at low-speed (400 - 600 rpm) using a drill fitted with a proper mixing paddle. Mix for three (3) to five (5) minutes to achieve a uniform colour and consistency. Scrape down sides of pail periodically. The paddle must be kept immersed in the material to avoid entrapment of air during mixing.

Note: When mixing in cold weather < 10 °C (50 °F), do not force the mixing paddle to the bottom of the pail. After adding Component B and Color-pak into Component A, mix the top 1/2 to 3/4 of the pail during the first minute of mixing. After scraping down the sides of the pail, mix again for another minute. The paddle should reach the bottom of the pail between the first and second minute of mixing. Scrape down the sides of the pail a second time and then mix for an additional two (2) to three (3) minutes until the sealant is well blended. When using Sikaflex®-2c Booster, add entire contents into Component A prior to mixing.

Note: When mixing 11.4 L (3 US gal.) unit, two containers of Component B and two Color-paks must be used. Color-pak must be used with tint base. For pre-pigmented Limestone Grey, just mix with low speed using a drill fitted with an appropriate mixing paddle (no Color-pak needed).

Application

Recommended application temperatures: 4 to -38 °C (39 to 100 °F). Pre-conditioning units to approximately 21 °C (70 °F) is necessary when working at extremes. Move pre-conditioned units to work areas just prior to application.

Apply sealant only to clean, sound, dry, and frost-free substrates. Sikaflex®-2c SL should be applied into joints when joint slot is at mid-point of its designed expansion and contraction.

To place, pour or extrude the SL grade in one direction and allow it to flow and level as necessary. If extruding, load mixed sealant directly into bulk gun or use follower plate loading system. Place nozzle of gun into bottom of joint and fill entire joint. Keeping the nozzle deep in the sealant, continue with a steady flow of sealant receding nozzle to avoid air entrapment. Also, avoid overlapping of sealant since this also entraps air. Tool as required. Proper joint design for moving joints is 2:1 width to depth ratio, with a recommended 6 mm (1/4 in) minimum and 13 mm (1/2 in) maximum depth of sealant. For non-moving joints, the width to depth ratio can vary. To accelerate the cure of Sikaflex®-2c SL in cold weather temperatures, add Sikaflex®-2c Booster.

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. For removal of uncured material from hands and sensitive surfaces, use Sika® Hand Cleaner towels.

Limitations

- The ultimate performance of Sikaflex®-2c SL, depends on good joint design 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.
- Minimum depth in working joint is 6 mm (1/4 in).
- Maximum expansion and contraction should not exceed 50 % of average joint width.
- 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 three (3) day cure before subjecting sealant to total water immersion.
- Avoid exposure to high levels of chlorine. (Maximum level is 5 ppm).

- Do not apply when moisture vapour transmission exists since this can cause bubbling within the sealant.
- Avoid over-mixing sealant.
- Light colour shades tend to yellow over time when exposed to ultraviolet rays.
- When overcoating: an on-site test is recommended to determine actual compatibility.
- The minimum depth of sealant in horizontal joints subject to traffic is 13 mm (1/2 in).
- Do not tool with detergent or soap solution.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent SAFETY DATA SHEET containing physical, ecological, toxicological and other safety-related data.

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FOR INDUSTRIAL USE ONLY

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